

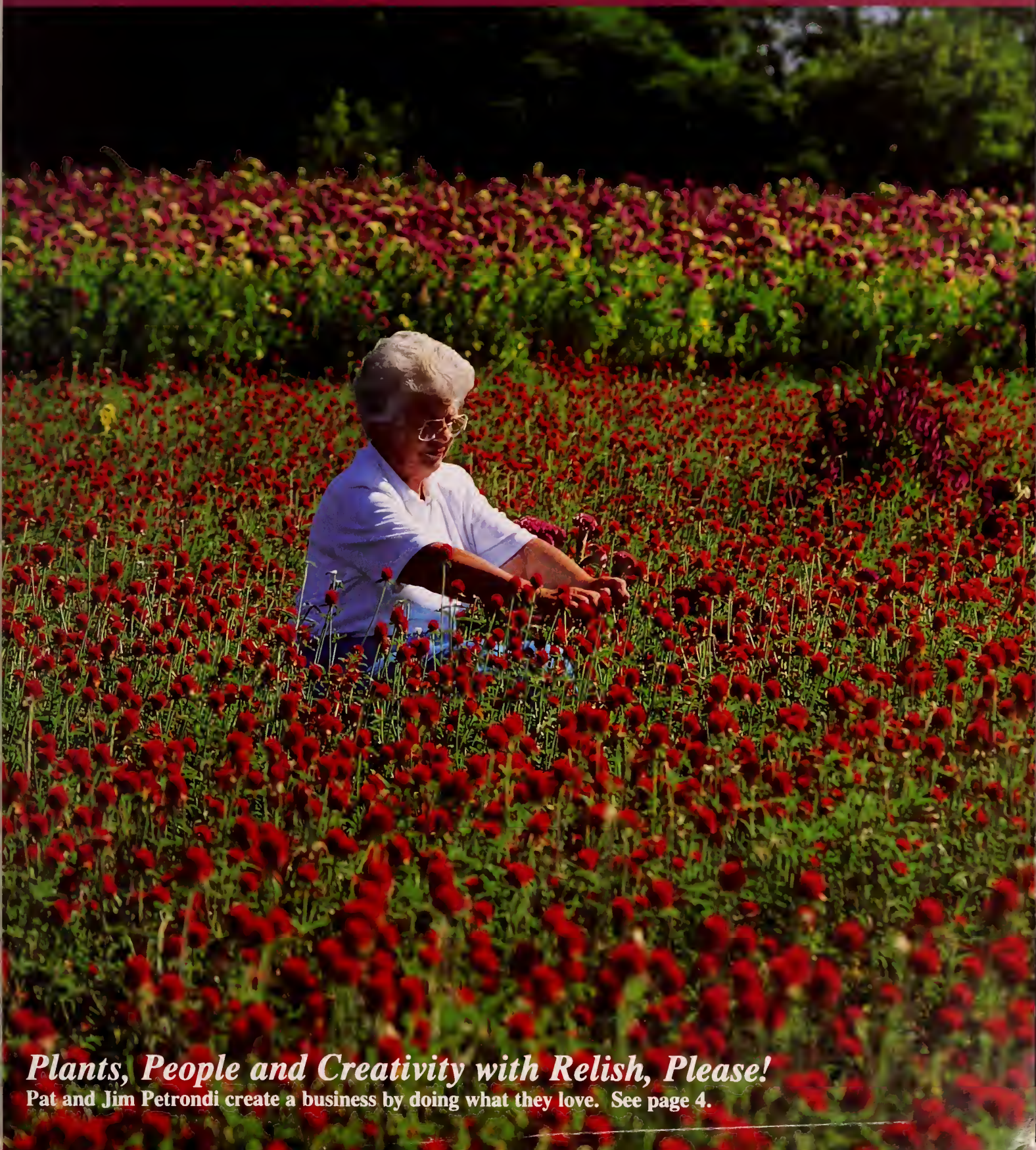


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THE PENNSYLVANIA HORTICULTURAL SOCIETY'S GREEN SCENE

SEPT./OCT. 1993 • \$2.00



Plants, People and Creativity with Relish, Please!

Pat and Jim Petrondi create a business by doing what they love. See page 4.



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CORRECTIONS: July, 1993 issue of *Green Scene*.

Page 4: Joan Narrigan's garden is in Avalon, not Stone Harbor.

The gardening site pictured on page 31 is Johnson Homes not Champlost Homes.

The Editor

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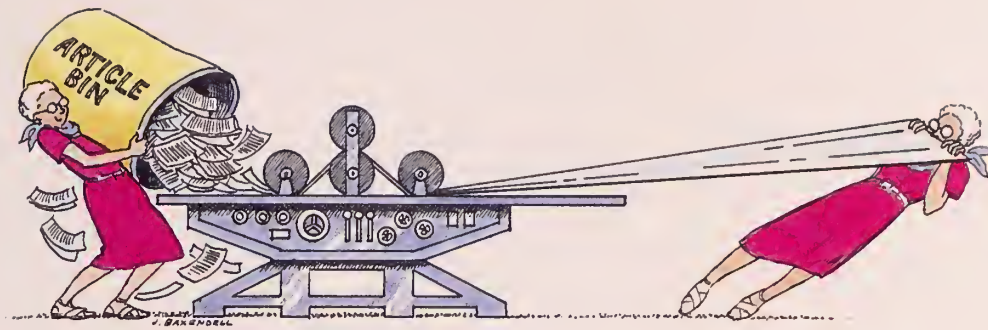
19.



28.

Front Cover: Perched on a stool, Marcella Miller harvests red globe gomphe at the Petrondis' 1847 Farm in Pottstown. The 200 pounds of the handpicked flowers yield 40-60 pounds of clean seeds for George W. Park Seed Co. in Greenwood, South Carolina. See page 4.

Front cover: photo by Larry Albee



If Paper Could Stretch

by Jean Byrne

Often magazine editors sigh, wishing pages were made of rubber, to accommodate everything they've collected for a specific issue. Nothing to do but murder your darlings, that is temporarily kill the articles that won't fit. Reluctantly, I had to do just that for the July issue — "gardening at difficult sites" is a subject that would fill volumes, never mind a 40-page *Green Scene*.

Not to worry, though, as the angel stayed Abraham's hand when he went to slay Isaac, so two of the fine articles we had to kill temporarily because of space restrictions are printed in this issue. They are particularly worth your interest because they are written by three practicing experts, who are as skilled with the pen as they are with the tools of their professions. The piece on assessing soils by John Collins and Sarah Willig, and the piece on creating screens in the garden or in the landscape to keep out the ungracious world by Rodney Robinson continue the difficult sites dialogue begun in July. Have we left out something you wish we'd dealt with about your difficult site; yes? well give me a call (625-8254) and we'll see if we can put it right.

* * *

People have often said one of the fringe benefits of hanging out at the Pennsylvania Horticultural Society is the good food. Staff, exhibitors and volunteers all leave

the Flower Show week a few pounds heavier because everyone brings in their best — a chestnut soup; a sandwich with a creamy french cheese, walnuts, watercress; a mouthwatering lunch in the judges lounge, or cookies to die for as you move across the floor during Show setup.

Well, Sally Graham and Sandy Manthorpe, both active at all levels in the Society, saw no reason we shouldn't share the wealth, so they've worked full tilt this year with wonderful people on many committees including Jill Evans heading Recipe Selection, Marie Toder heading Marketing and Anne Cunningham chairing the Editorial and Design committee to produce a gem of a cookbook. Anne Cunningham's article on page 14, will, we hope, coax you to the table set with "great recipes from great gardeners."


* * *

We welcome to this issue Christopher Weeks, who has published architectural history books in Maryland; Chris jumped in when we were looking for a writer who lived close to Valerie and Robert Schultz's interesting nursery in Monkton, Maryland. The Pennsylvania Horticultural Society Hotliners last fall had the good fortune to visit the Schultz's nursery, and the group had a terrible time tearing itself away. Chris's story and Robert's photos will help you savor the Schultz's magic long distance.



The 1847 Farm flower shop bursts with summer's bounty and the richness of its colors, each flower preserved to perfection.

Plants, People and Creativity with Relish, Please!

 by Cheryl Lee Monroe



Jim and Pat Petrondi.

Pat Petrondi started working with flowers for the love of it. Now Pat and her husband Jim run a successful full-time business that has grown over the years from just a half acre to a 10-acre farm.

Here's the deal: she loves people, she works with customers; he loves growing, he plants, dries and ships and flowers. She loves color and interior design, she creates the floral designs; he loves carpentry, he renovates and creates the buildings. A partnership, a perfect complement, Jim and Pat Petrondi have built 1847 Farm in Pottstown, Pa., putting 30 years and lots of love into the effort.

Pat Petrondi believes there are no rules: "If you're gonna do it, stop talking about it, just do it." How many times have I heard that from parents, on television commercials, and again, from Pat Petrondi. The Petrondis heed their own advice.

So what are they doing? They're doing what they love. Do what you love and the money will follow, advocates Marsha

Sinetar in her book of the same title.* Over 200 pages of pep talk, justifications and formulas for figuring out what one relishes, and doing it. No small task but feasible if you're the Petrondis.

Their garden, plants, and designs enrich their busy lives. They thrive on creativity, roll with the ebb and flow of nature, take hard times in stride and make no excuses about what they're up to. It adds up to their idea of a full, rich life. Pat's floral designs and Jim's dried flower crops speak volumes, and they talk about projects with energy, not exhaustion; creative people with much to see, explore and accomplish. Yes, there are too many things to do, and they are glad.

Welcome to 1847 Farm. The converted

**Do What You Love and Money Will Follow, Marsha Sinetar, Dell Publishing, NY, NY, 1987.*

stone bank barn, the product of Jim's skills and expertise, houses a retail design shop specializing in flowers that the Petrondis grow and dry. The barn bursts with the billowy heads of pink, lavender and burgundy crested celosia, gomphrena, roses, larkspur, and herbs, the colors of their summer songs preserved to perfection. The shop bursts with Pat's designs: dried flowers woven into every shape and container, every nook and cranny. Outside, 10 acres of celosia, gomphrena and artemisia are the growing concern; crops shipped to customers throughout the United States.

The business began innocently with Pat following her interests and creating dried floral designs. With a large house and a young family of five children, she began saving five dollars each week from grocery



photos by Larry Albee

Celosia, heads measuring 4-5 inches across, and perfectly suited for floral designs, are selected from the fields, carried to the barn and sorted by color.

money to inexpensively fill the spaces in lieu of furniture. The arrangements received rave reviews from friends; Pat gave them away to those proclaiming delight, while continuing to create new ones. From there, a stint in a local flower shop, and a home party business, led to a thriving business. Jim Petroni, a builder, watched the business grow and watched Pat having a great time.

Pat translates her love of interior deco-

Jim, relying on ingenuity and building skills, translated ideas gathered in Holland to fashion a drying room that accommodates 1,000 bunches a day.

rating into her designs, relishing boldness in color and materials. She treats color as the protagonist, adding zing to her designs. A touch of red in an oriental carpet is the clue to a brilliant red arrangement lending song to a customer's room; or wreaths bursting with deep red celosia, mountain mints, and roses. Her ideas, the colors, and designs lend excitement barely contained within the walls of the shop. Dismayed at the plethora of mauve and blue in homes, Pat believes "rooms should have personalities" like those of their owners. "The best loved homes and gardens are expressions of their owners," says Pat, "stunning in ingenuity, creativity, individuality; not those easily recreated from a magazine or snapshot."

In the 1970s a lull in interest for dried flowers led to a small selection of dried grasses, orange and red strawflowers and lots of statice. Designers created small round arrangements that mortify Pat to this day. The 1980s brought a resurgence of interest led by a desire to preserve the natural beauty of flowers. The '90s find spectacularly preserved peonies, larkspur, roses, celosia; herbs, from mountain mints to salvia of every description; and perennials from artemisia to yarrow. You will find very little statice at 1847 Farm; rather, you will find lots of new selections shouting with color plus strawflowers, now in every shade of pink, and peacock feathers and fruit.

Jim, one to ponder things carefully, continued watching Pat's business grow over time. He swore plants would not be his vocation, having grown up with a father who owned a landscape company. The 1970s, however, brought creeping interest rates in the building industry, and Pat was having all the fun. Pretty soon, he'd pondered long enough and proposed he grow



Magnificent red crested celosia on racks in a special drying chamber, large enough to dry hundreds of bunches each day.

the flowers Pat needed. Bingo! This team was on to a new plan with belts tightened and one-half acre. Soon one-half acre was one, five, 10 and so on, making it necessary to rent property from nearby farmers.

At the outset, they grew everything, eventually finding what they did best; which crops loved the hot dry Delaware Valley summers; and most important, which were marketable. Over time, they pared down the selection and focused on crested celosia, artemisia and gomphrena. They supplemented their shop offerings with flowers from around the world including Holland, Israel, Australia, and an ever increasing share from the United States.

On the growing side, Jim's spring prepa-

rations start with fumigation, sterilizing the soil with chemicals to destroy weed seeds. This allows celosia seed to be sown directly on top of the soil, without a covering of soil, for maximum seed germination. As one who compulsively tucks seeds in with a covering of soil, I'll gladly follow Jim's example, covering only those seeds such as the sunflowers that catch the fancy of birds.

Weeds are the enemy, sucking vital nutrients, and the quality from crops. Fumigation keeps beds clean; the aisles, however, remain unsterile to allow for equipment. The battle is on! Weeds are kept at bay with a cultivator throughout July before celosia gets too tall; in August the weeds in the aisles grow rapidly, over-



Pat Petrondi (left) and her team, all part-time staff, create arrangements filling the nooks and crannies of the shop.

taking celosia in one short month. Lambs quarters and pig weeds lead the pack. Jim resorts to mowing weeds in the worst years, ensuring that they don't set seed and compound the problem for next year.

After combating summer weeds, the move is on to harvest crops in a narrow window of time, starting the second week of August and racing to a finish decided upon by Jack Frost. Harvesting celosia flowers at 4-5 inches, fields can be cut three to four times, needing 45 days to harvest everything.

The icing on the cake, quality, comes in the drying. Jim, relying on ingenuity and building skills, translated ideas gathered in Holland to fashion a drying room that accommodates 1,000 bunches a day. Weather, heat, sun and rain play a large role in the size of the flower heads, but the exquisite vibrant colors are the art in Jim's techniques: a combination of perfect temperature and length of drying. He guards his recipes for time and temperature, having experimented to ensure that flowers aren't brittle and won't disintegrate when handled, yet also ensure that the entire process of harvesting moves at a good pace. If you opt to dry flowers from your garden, Pat suggests hanging them upside down in hot, dry places as they did for years before building the drying room. When the rafters, attic and garage are filled, Pat advises using closets as standbys.

Amid the harvest, they save seed for the following year, preserving the best colors. A keen eye can quickly discern a new color and the Petrondis keep their eyes peeled. Celosia with the best colors are cut separately from the field, covered with brown paper bags and hung to dry. When winter

arrives, seeds are cleaned and labelled for the next season's crops. Jim can advance the two or three years it takes to build seed stock for production using the greenhouse he restored; large pots coupled, with the heat of the greenhouse in summer, compress two seasons of seed collection into one. Jim is contemplating another greenhouse; he's sure there's time somewhere in the days to play or experiment there.

Keen eyes also brought the Petrondis an opportunity to grow gomphrena seed for the Geo. W. Park Seed Co. in Greenwood, South Carolina. Jim, as a favor, sent his best red globe gomphrena seed to a Park customer years ago, and a new relationship was born. Hundreds of pounds and years later, they still provide their introductions, *Gomphrena* 'Strawberry Field' and *G.* 'Lavender Lady' to Park Seed. The seed business is on the horizon for the future; there one needn't race Jack Frost to the finish. Frost is not a threat until December to flower heads collected purely for seed and, after all, there's Marcella Miller.

Collecting seed takes time; Marcella picks each small gomphrena flower head individually from the plant. Gomphrena grows only 12-18 in. and requires patience and a stool on which to sit while harvesting. The Petrondis rely on Marcella, who "wandered in" one day in response to a sign advertising for additional help. Now an important part of the harvest, Marcella, a septuagenarian, with spunk to equal Pat's, joins them every year, relishing the fall days and seeing exclusively to the harvest of what she refers to as her babies, the red globes.

The Petrondis moved to 1847 Farm in 1990, starting afresh with 10 acres having

outgrown their Westtown home and rented fields. They renovated the 1847 house and barn, wrapped gardens around them, and reestablished their business in a few short years. This is their dream, a life filled with plants and building for Jim, people and flowers for Pat. A life they relish, filled with hard work, creativity and possibilities.

1847 Farm

10 Ebelhare Road
Pottstown, PA 19464
(215) 469-0631

Pat and Jim Petrondi, Proprietors

Association of Specialty Cut Flower Growers, Inc.

The cut flower industry for specialty flowers has grown by leaps and bounds in the United States during the past decade. Growers now offer perennials, biennials and annuals that broaden the range of fresh and dried flowers available. As bulbs, roses, carnations and other staples of the flower industry are imported in greater quantity, the specialty flower growers are fulfilling the void.

The Petrondis, themselves specialty cut flower growers, both sell and buy from businesses throughout the United States. Jim Petrondi says that participation in the Association of Specialty Cut Flower Growers (ASCFG) helps him to locate customers and sources. Jim finds the organization invaluable to his business and enjoys interacting with members.

The ASCFG's goal is to help growers of specialty cut flowers produce and sell better crops. They do this through conferences, tours, seminars, publications, research and publicity; members are growers, wholesalers, distributors and universities involved in research.

For further information, contact:
Association of Specialty
Cut Flower Growers, Inc.
155 Elm Street
Oberlin, OH 44074
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Cheryl Lee Monroe is a horticulturist who writes for *Green Scene* as well as other publications. She gardens in West Chester, Pa.

Land for the People Who Work It

Neighbors gain a lot more than land when they organize to save their community gardens threatened with extinction by planners, developers or owners.



by Libby J. Goldstein

Where have all the gardens gone?

Don't look for one at Fourth & Lombard streets, one of the Pennsylvania Horticultural Society's earliest community gardens. It's gone. It's now the site of the Old Pine Community Center.

Good food and good friends once grew in community gardens at 29th & Grays Ferry Avenue. Now factories and warehouses grow there.

A huge house was planted over the first Southwark Queen Village Community Garden. Even as the displaced Queen Villagers moved to 3rd & Christian streets in 1976, they were scheming to secure their new garden.

Ten years later, Neighborhood Gardens Association/A Philadelphia Land Trust was set up to help people to do just that—save community gardens.

Most Philadelphia community gardens were planted on vacant lots. Landowners and bureaucrats regarded the gardens as an "interim use" and as a way to have neighborhood people keep the lots "clean and weed free," as required by City codes, without cost to the owner. But when tax delinquent sites came up for sheriff's sale, frightened gardeners turned to Penn State Urban Gardening and the Pennsylvania Horticultural Society's Philadelphia Green for help. Urban Gardening and Philadelphia Green began to hold land acquisition workshops for the gardeners and to negotiate garden protection schemes with City agencies. Gardeners like William and Dorothy Lofton actually bought their North Philadelphia garden at Sheriff's sale. The City kept others so that people could go on gardening. It wasn't really clear, however, who was responsible for what.

It was clear that the gardens might still be at risk.

Public and private landowners generally expect to find "higher" uses for their "vacant" land. In the city and the country, farms and open space are not considered the land's "highest and best" use. Buildings are; they generate higher rents, higher prices, more profit and higher taxes. Gardens, parks and farms cost money... for maintenance, insurance and, on privately held land, property taxes. Community maintained green space like sitting parks and community gardens may be a valuable amenity in urban development and redevelopment, but it can reduce short-term profitability for a developer and long-term tax advantages for the city.

People in community gardens needed something more if their gardens were to be really secure. They needed a non-profit organization that could acquire and hold land for the gardeners; insure it against potential liability; handle any taxes and, if the neighborhood and gardeners no longer wanted a garden, to dispose of it.

They needed a land trust.

A land trust for Philadelphia gardens

Conrad Weiler, community activist, Temple professor of political science and careful newspaper reader, probably started it all. It was Weiler who first read about Penn State's Urban Gardening Program, while I was its director, and Southwark/Queen Village Garden, which became one of its demonstration gardens. It was Weiler who read that Trust for Public Lands (TPL) had gotten money to preserve open space in cities.

Conrad and I invited Trust for Public Land to a meeting in the Queen Village Neighborhood Association offices to propose that they buy Southwark/Queen Village Garden for our neighborhood. TPL offered to sell us technical assistance so we could do it on our own. We couldn't deal. Still, garden preservation became part of the Urban Gardening work plan. And, understanding our dreams and schemes, TPL worked with us and with PHS's Phila-

delphia Green to keep the idea of a land trust for neighborhood open space alive.

One facet of developing Mayor Goode's 1985 food and agriculture policy was a "community open space needs assessment." Dozens of people worked on it. They got excited about building a structure for garden preservation and formed a Land Trust Organizing Committee. The gardeners, technical assistance organizations, civic associations and City officials on the committee designed an organization to meet Philadelphia's special needs. In 1986, Neighborhood Gardens Association/A Philadelphia Land Trust became a reality.

NGA's primary purpose is long-term preservation of neighborhood gardens in low and moderate income neighborhoods. It helps gardeners and neighborhood groups to acquire and to hold their gardens. If they aren't organized for direct ownership or leasehold, which can be expensive and complicated, NGA will acquire the land or negotiate long-term arrangements so people can garden on it as long as they want. Either way, the gardeners manage and maintain their own gardens.

Philadelphia's community gardens* have often been pivotal in the social and physical revitalization of neighborhoods where the development cycle has sunk to abandonment. NGA's directors, who are gardeners, technical assistance group representatives, and City officials, are intensely aware of the profound effect those gardens have had on neighborhoods.

So NGA works with all manner of organizations... public, private, neighborhood-based and national... to make sure that "community managed open space" is an integral part of Philadelphia's neighborhood development and redevelopment plans. People in Point Breeze and in Susquehanna have been turning vacant lots

*Throughout Philadelphia, for example, 49 acres alone are devoted to 477 community vegetable gardens. Uncounted numbers of ornamental community gardens including flower, sitting, street blocks, etc. occupy close to that acreage as well.



At top: Seventy Southwark/Queen Village gardeners work and enjoy the garden's serenity from dawn to dusk. Susan Peterlin (foreground) works at the end of the day in one of the 65 plots at the SQV Garden on Christian Street between 3rd & 4th Street. **Bottom:** Back in 1991 the then Mayor, W. Wilson Goode, joined the author Libby Goldstein (black sweater) and her fellow gardeners and their friends at SQVG's annual barbecue.

into gardens for 40 years. NGA and these two neighborhoods have now designed comprehensive open space inventories and strategies to secure the existing gardens. The neighbors and specific City agencies will use those plans and strategies in neighborhood redevelopment and reinvestment. NGA has begun to acquire some of the gardens for their gardeners and assuring long-term access for others.

We knew we would need all the help we could get to keep this garden. Invitations to political figures have become a tradition. According to local lore, if they don't come to the barbecue in September, they lose in November.

Thus far, despite all manner of legal and political complexities, NGA has secured eight gardens for their gardeners by acquiring the 18 separate properties the gardens occupy. Twenty-five properties comprising 11 gardens should go to settlement soon, and 24 projects, involving 42 parcels, are underway. Three groups have acquired their own gardens directly using NGA for technical assistance.

Acquiring vacant land in the City is really perverse. Anyone who buys or is given a piece of property is responsible for its environmental problems even if they were caused by an earlier owner (or midnight dumper). Almost every empty lot once had a building on it — houses that might have had oil tanks in the cellar, warehouses storing who knows what, factories and even gas stations. But under the Superfund Law, if you take title, you pay to clean up any toxic material ever found.

Any number of City agencies have to approve the “new” land use. And City Council as well as the agencies have to approve the disposition of publicly owned land before it can finally be turned over to a community group or to NGA.

Having waded successfully through all of this, NGA will help neighborhoods and gardeners work through it themselves or decide to have NGA do it for them. Its staff and board members meet with aspiring garden owners, often for months, to work out the best strategies for securing the land.

Permanent gardens, at last

NGA was a scheme come true for the gardeners at Southwark/Queen Village and at Germantown's Church Lane who had been part of The Land Trust Organizing Committee. It was to become a significant tool for the gardeners at 47th & Warrington



Now that Neighborhood Gardens Association (NGA) has acquired the Church Lane plot for the Germantown neighbors, Christopher and Cathy Paulmier can garden cheerfully, knowing there's a garden in Baby Carter's future.

in Southwest Philadelphia who, in 1990, were trying to secure their garden for the second time.

Southwark/Queen Village Garden

Queen Village in the '70s was coming back from years of neglect and abandonment. We were an uneasy mix of younger “pioneers” and older African American and ethnic residents and business people. After living in the neighborhood for a while, I decided I could do more gardening on a community garden than in my yard. Marge Scherneck, the president of Queen Village Neighbors Association, laid it on the line, “If you want a community garden, you chair the committee. We'll give you whatever help you need.”

By Queen Village Day on May 17, 1975, 16 families were gardening. We even had a motto, “Farm Out!” and bylaws, adapted from the National Gardening Association.

After just a year, the friendly owner of our original garden began driving huge construction trucks on it. Taking the hint, we moved to 3rd & Christian Street, a vacant lot that had been the Henry Berk School. The new garden was perfect for the neighborhood, which had opposed building a health center on the lot. The garden would dress up the route to Old Swede's Church for passing Bicentennial celebrants,

and it was big enough to include all the folk who wanted gardens but didn't have room at home.

We named the new place “Southwark/Queen Village Garden” to celebrate our neighborhood, pre- and post-gentrification, and embrace old and new residents. The officers of the Queen Village Neighbors Association and Southwark Plaza Tenants' Council as well as our City Council, State and Federal representatives came to the First Annual Southwark/Queen Village Barbecue. We knew we would need all the help we could get to keep this garden. Invitations to political figures have become a tradition. According to local lore, if they don't come to the barbecue in September, they lose in November.

Everyone says that the garden has been good for the neighborhood. The garden is the place where we all work together, get to know each other and win recognition for the whole community. A great spot for barbecues and gossip in the cool of evening.

Land acquisition is ultimately a political act. In 1983, our landlord went out of business, and the garden became federal “surplus property.” It was a time of great fear and great opportunity. (The White House wanted all surplus property sold. If we could get around the President's Executive Order, we might actually be able to



Spring planting at the Church Lane Garden. The sitting garden (upper left) is a nice spot for resting between chores.

establish a permanent garden.)

At the request of the Queen Village Neighbors Association, Representative Thomas M. Foglietta held a gathering in his Washington office for representatives of several federal agencies that could request "our" surplus property for their departmental programs. The National Park Service had a program that could give "surplus property" to municipalities or states for recreational use "in perpetuity." We decided to work with them.

Mayor Goode gave us the go ahead. We wrote the City's request to the National Park Service. Councilman Jim Tayoun made sure that it got all the necessary signatures and councilmanic resolutions. Two years, scores of letters and hundreds of phone calls after the process began, National Park Service and the General Services Administration leased the garden to the City of Philadelphia for 10 years. It was a compromise between the Reagan Administration, which wanted to sell valuable surplus sites like ours, and the "intense interest" in the project expressed by elected officials, the Human Relations Commission, the American Association of Community Gardens and anyone else we could think of.

Before his term ended, Mayor Goode again asked the National Park Service to deed the garden to the City as a permanent recreation site, and NPS agreed. Before we could celebrate, however, there was a catch. The City required a licensee who

would be responsible for maintenance and liability insurance. Since neither the garden or QVNA can afford the insurance, NGA has agreed to sign the City's gardening agreement. NGA will incorporate the garden under its liability insurance policy for all the gardens they own. Without NGA's intervention, we would have gotten the City a park, but we wouldn't have been able to garden on it. When the deed is transferred and the license agreement signed, our gardening park should, at last, be dedicated this fall.

Church Lane Garden

Church Lane Garden's dedication was in September, 1991, 13 years after the first gardeners turned its soil.

In the early '60s road planners were slicing through Philadelphia. One of their inspirations was the "Belfield Bypass," a six-lane highway planned to run right through the middle of Germantown. An enraged and organized community stopped the road and saved most of the neighborhood, but 20 houses on Church Lane had already been condemned and bought by the Redevelopment Authority. Eight of the houses were torn down leaving a large vacant lot. Wister Community Council wanted to keep the lot from turning into an eyesore; they liked the idea of turning it into a community garden.

In the beginning, two groups shared the lot. Germantown Organic Gardening Club, a diverse group of Weaver's Way Coop

members, and Church Lane Garden, most of whom lived in the neighborhood. Glenna Powell led the Organic Gardening Club, which had 12 plots. Chris Nicholson was coordinator of Church Lane's 18 plots. Luckily, one of the gardeners was a neighborhood landscaper who helped build a fence for both gardens and provided tons of wood chips for paths and mulch. Later, Glenna moved, and the two gardens combined. PHS's Philadelphia Green worked with them to add a sitting garden so people could rest, eat and enjoy the garden view.

Through the years, Church Lane kept up its ties to Wister Community Council. Several gardeners were members of the Council, and they made sure it knew what and how the garden was doing. They also maintained close ties to Penn State Urban Gardening and Philadelphia Green, which at one point successfully kept a prospective developer from acquiring the site.

Every year since 1978, the gardeners got permission to work their land from the Redevelopment Authority. But pressure to "redevelop" the land was intense. The Authority staff knew how much the garden meant to the gardeners and to Wister Neighborhood Council. They kept suggesting that the gardeners buy it. The gardeners started a "purchase fund" and held sales to raise money, but they were too few to raise enough.

Since Chris Nicholson had been an active member of the Land Trust Organizing Committee, Church Lane turned to NGA

in 1989. Everyone agreed that if NGA bought the garden, the gardeners would repay some of the money every year, and NGA would use their money to help other neighborhoods preserve their gardens. NGA successfully bid on the land and negotiated a 10-year mortgage with the

The garden is Jo Anne Fishburn's "main source of community contacts and relationships," not just a place to cultivate her garden.

Redevelopment Authority.

Everybody — gardeners, greening groups, Redevelopment Authority officials, Wister Council — came to Church Lane's dedication to celebrate the cooperation and the dream. Church Lane and NGA had turned a potential blight into a permanent community garden.

47th & Warrington

It was just too cold last November for the gardeners and their neighbors at 47th and Warrington, in Cedar Park (right near University City) to be outside, so they celebrated the realization of their vision with a pot luck supper at Calvary United Methodist Church where it had all begun.

Bill Whitaker, who would become the garden's first coordinator, and some students had been gardening on part of the site in the early '70s. In 1974, the neighborhood wanted to expand it. They held their organizing meetings at Calvary, and began gardening on 15 plots. In 1978, their quintessentially urban mix of permanent residents and students grew to include Southeast Asians newly come to Cedar Park and to America and bearing seeds from home. The new gardeners also brought mushroom compost, fencing and new boards for a gate provided by their sponsor, the Archdiocese of Philadelphia. The garden now had 90 plots filling its 28,000 sq. ft.

One day at Urban Gardening, I got a call from the owner of the site. He'd given the gardeners permission to use his land, and now he had a citation from Licenses and Inspection saying that the lot was weedy. He had to clean it up or L&I would do it and charge him. Even though he lived right down the street from me, I'd had no idea that he owned the garden. We got the matter straightened out by telling L&I that the site was a garden; they withdrew the complaint. From time to time, he and I would talk about the garden and what would become of it. The owner was not



At top: Early spring: Neighbors sold baked goods and plants to help secure the Warrington Community Garden, the first stop on last year's Secret Garden Tour in University City. The vine-covered wall on the right is the one the "wallers" worked fiendishly to save. **Bottom:** In the Warrington Children's garden (left to right) Lasitha Wickramasinghe, Bonnie Reichert, Harry Fishburn, Gabby Rainey, and Chelsea Reichert enjoy their garden's fall abundance, chaperoned by the adult Gamini Wickramasinghe from Sri Lanka. In the background is Calvary Church, a supportive neighbor on Baltimore Avenue.

well and wanted to retire.

He was willing to consider donating it to a nonprofit for a possible tax advantage if we could find a nonprofit to acquire the property. After a long search, Bill Whitaker convinced Calvary that owning a permanent community garden would benefit the Church and its neighborhood. Joseph Hennessy, a partner at Morgan, Lewis and Bockius, signed on as *pro bono* attorney/negotiator. He and the owner met . . . once. My own neighbor sold the land to a pair of developers for \$20,000 and never said a word.

The developers came up with a plan that angered the entire neighborhood. They wanted to build so many houses that the neighbors began calling it the "R-20" plan. (R-10 is the highest residential density in the Philadelphia code.) Worse, still, the developers wanted to remove the high stone wall between the garden and the houses along 48th Street. The homeowners loved the wall. They wanted to keep it. They were "the Wallers."

The Wallers, gardeners and Cedar Park Neighbors began meeting to find a way to stop the development. In the beginning the Wallers and other neighbors were much more involved than the gardeners, but they all met and tried to find some use for the lot that would satisfy the whole community. In the process Bill Whitaker turned the garden plot chart over to Gihon Jordan, an engineer and planner, who was especially good at

"the bureaucratic stuff." Gihon and an NGA board member, who lived in the area, realized that the developers would give up if the neighbors kept up their opposition long enough. What they needed was a unifying theme. Preserving the garden was the only plan everyone could agree on.

Led by Nelson Wicas and by Catherine DeLong Smith (a Waller and a gardener), the Wallers began raising money; they even committed to donating \$1,000 per household to take title to the wall and to begin buying the garden. An anonymous neighbor's offer to give the groups a mortgage if they needed one kept the process going. They even got a legislative initiative grant through State Representative Jim Roebuck for their acquisition fund.

Now, the gardeners really joined the effort. They held porch sales and bake sales and did some catering. And they organized. They wrote bylaws, opened a bank account and signed a memorandum of understanding with the Wallers. They planted a flower bed in front of the garden and built a sitting area in the back, so everyone could enjoy the site.

Jo Anne Fishburn, the newest garden coordinator, says that the acquisition process has changed all of the relationships in the garden and in the neighborhood. "It's been a real organizing tool." The garden is her "main source of community contacts and relationships," not just a place to cultivate her garden.



The gardens on Venango Street west of Broad Street have come and gone. Here Connie Hylton, an optimistic neighbor, breathes new life into the vacant lots there. Maybe this time things will be different.

Eventually the neighbors and the gardeners raised \$14,800. NGA convinced the developers to lower the price from \$140,000 to \$40,000. Catherine and Royer Smith found a buyer for the Baltimore Avenue end of the site, which was not really part of the garden, for \$6,000. Last year NGA bought the land for \$34,800. Like Church Lane, the community and the gardeners continue to repay NGA; NGA will use the money to help preserve other gardens in other neighborhoods.

Meanwhile, neighbors and gardeners are working together to realize still other dreams like a watering system and a handsome front fence.

Sharing a dream

In the '70s, turning vacant lots into community gardens reflected a new ethic of neighborhood self-sufficiency and land stewardship. In Wister and Queen Village, the gardens fit broader neighborhood goals from the outset. Neighborhood gardeners and neighborhood organizations worked together. At 47th and Warrington, that cooperation came later, but preserving the garden was exactly the strategy the neighborhood needed to stop an unwanted development and to "Save the wall."

All of these gardeners had to work through ethnic and economic differences just to keep their gardens going. They became important parts of their communities. They'd learned the internal and ex-

ternal politics of the land.

That didn't happen on Venango Street west of Broad. Through the '70s and early '80s, 100 gardeners worked acres of vacant land. Whenever the gardeners had a disagreement, some of them moved to another part of the site to start a new garden. The neighborhood development corporation cared about jobs and housing, but not gardeners and their gardens. When new housing was finally built on Venango Street, the developers wanted to keep some space for gardening. But now there are only vacant lots. The gardeners couldn't work together. The development corporation, which had no grass roots support, is no more. None of them had learned the politics of the land. However, new gardens are springing up on the Venango Street lots. Maybe this time things will be different.

Even as it preserves gardens in low and moderate income neighborhoods, NGA (and its successful gardeners) teaches people about land stewardship and about the politics of the land. They are lessons that we all need to learn. If we do, we can all live together on our land in the city and even on the planet.

•

Libby Goldstein is finishing her third term as chair of Southwark/Queen Village Garden. She is a board member of the Neighborhood Gardens Association/A Philadelphia Land Trust.

Funding for Neighborhood Gardens Association/ A Philadelphia Land Trust

NGA is a private nonprofit organization whose mission is to preserve community gardens in Philadelphia as permanent neighborhood assets. Funding for NGA's operations is through donations from individuals and corporations, the Pennsylvania Horticultural Society, and The Philadelphia Foundation. The William Penn Foundation and The Pew Charitable Trusts have provided grants for property acquisition and outreach programs.

* * *

What To Do *Before* You Find a Sale Sign on Your Community Garden

- Get all the gardeners together and talk about the future of the garden. Do you all want to keep it "forever"?
- Talk to other people in the neighborhood and to block captains, civic associations, Town Watch, etc. See how they feel about keeping the garden and if they're willing to help you keep it. If they're not interested, keep going back.
- Find out who owns each parcel on your site.
 - If you know all the addresses, go to the Board of Revision of Taxes at 34 S. 11th St., Philadelphia, Pa. (8:30 am -4 pm).
 - If you don't know all the addresses, go to the Department of Records, 153 City Hall (8:15 am -2:45 pm). The staff can help you find the exact addresses and the owners.
- Call NGA (215) 625-8264. NGA can:
 - do the research, legal work and negotiations to acquire the land for you to use;
 - get a long-term lease or easement for your garden;
 - help you incorporate so you can acquire the land yourselves;
 - help established groups acquire or lease property.

Sandy Manthorpe, co-chair of the Pennsylvania Horticultural Society's Cookbook Committee, enjoys a light moment with Thom Picara of Distinctive Floral Designs after he's completed the food and floral design to be photographed for the cookbook cover. Manthorpe and Sally Graham (see photo p. 15) are the pied pipers who led the cookbook teams to success.



Photo by Ira Beckoff

Two Pied Pipers Lead Cooks to Create a Cookbook:

Great Recipes from Great Gardeners



by Anne S. Cunningham

14 “Does anyone know how to get that Barbados folk recipe for Sweet Potato Pie,” whispers a young woman.

“Who made the raspberry conserve,” a gardener calls out.

Every year at the Pennsylvania Horticultural Society's Harvest Show, visitors and competitors clamor for recipes of the prize-winning baked goods and home-grown garden bounty.

Last year, words turned to action. Harvest Show chair Sandy Manthorpe said she'd love to work on a cookbook, and she'd prefer to do it together with someone who could keep a fast pace and get the job done, someone like Sally Graham. Across the floor, chairing the Youth Section of the Harvest Show, Sally Graham told recipe seekers she'd be delighted to put together a cookbook, but not alone; perhaps she could persuade Sandy Manthorpe to share the project. By the time the messages traveled over pumpkins and preserves, the PHS

cookbook started cooking.

Manthorpe and Graham are Pied Pipers, impossible to resist when they're rolling on the momentum of a new project. Prize-winning cooks, artists, editors, landscapers, writers, photographers, and a slew of professional business people flocked to the cookbook committees.

What started out as a collection of Harvest Show recipes, quickly snowballed into an avalanche of favorite dishes from friends of the Pennsylvania Horticultural Society. Gardeners, PHS staff members, Harvest Show and Flower Show volunteers, restaurants and catering businesses who serve PHS, members, friends from almost every state contributed to the collection of outstanding seasonal fare full of flavor and fresh ingredients.

About 80% of those who worked on the cookbook have a passion for cooking. Their idea of a great winter weekend is sitting curled up with a new cookbook or the latest issue of *Gourmet*, then translating

what they've read into a scrumptious feast. The other 20% of those who helped love good food but prefer to spend two hours in a favorite restaurant rather than two hours in their own kitchen. Both groups are well represented with tasty recipes that range from intricate to easy.

Regional tastes blend in a tempting collection that defies labeling and rejoices in creative cooking. Recipes for Herb French Chicken Sauté and Black Bean Salad suggest distant origins, while Noodles Cornucopia and Michigan Baked Beans sound like an American blend of old world/new world/good cooks who take their best recipes along when they move.

By far the most difficult part of the project was agreeing on a title. The editorial committee tried. The marketing committee tried. PHS staff and members tried. Hundreds of suggestions tumbled in, continuing the exuberance surrounding the creation of the cookbook. Some titles were winners, others meant just for laughs: *Gardener's*

Grub, Horticook, Hort Cuisine, Thymely Treasures, Pots and Pansies, Sow and Stir, Sow and Tell, Grow and Tell, Feasts and Flowers, Vines to Vittles. Would you buy a cookbook titled *Pounds and Scents*? How about *Prunes and Pruning* or *Picks and Pans*?

It took a clear thinking member to point out that we were offering "Great Recipes from Great Gardeners"; did we need to say more?

Balancing the recipe selection for taste

Monte Bello Tiramisu

3 egg yolks
 ¼ cup sugar
 1¼ cups mascapone cheese
 2 egg whites, stiffly beaten
 ½ cup espresso
 3 tablespoons Amaretto
 16 ladyfingers
 3½ ounces bittersweet chocolate, grated

Beat egg yolks and sugar in mixer bowl until thick and lemon-colored. Fold in cheese one tablespoon at a time. Fold in egg whites. Blend coffee and liqueur in bowl; drizzle over ladyfingers. Alternate layers of ladyfingers and filling in 8x8-inch dish; sprinkle with chocolate. Chill overnight. May substitute baking cocoa for chocolate. Yield: 8 servings. Freezes.

and nutrition, we found the recipes covered the spectrum from rich and decadent to trendy and healthy. Longtime PHS friend and staff member, the late Charlotte Archer, made no apologies for her extraordinary dishes, which she boasted were full of "mid-century deliciousness" (before we worried about cream, cholesterol and grams of fat). Other talented cooks and gardeners use spices and herbs to create dishes that are considered 'light,' though not at all light in flavor.

Given the current national preoccupation with healthy eating, it's not surprising how many recipes feature fresh greens, tangy herbs and crunchy vegetables. The popularity of local farmers' markets, not to mention Philadelphia's Reading Terminal Market, made it easy to find the ingredients for unusual fare like Rose Geranium Cake or Parsley Purée Soup if they're not home-grown. And each recipe in the cookbook has a complete nutritional breakout for those who want to know the calories, cholesterol, fat, etc.

Jill and Wally Evans kept track of nearly a thousand recipes that arrived by mail at their Norristown home. More than once,



photo by Ira Beckoff

Sally Graham (center), co-chair of the Cookbook Committee, gets ready to present the production schedule to the Marketing Committee. The Marketing, Editorial and Recipe Selection committees spent hundreds of hours preparing the book, and Graham says, "Frankly, we all gained a few pounds testing recipes on the way to the printer."

Jill came home from work to find a plate of cookies or bowl of soup hand-delivered along with a recipe, so she could sample the finished product. Many recipes came with histories.

Reminiscences began something like "I remember my grandmother making this and how special I felt scraping the mixing

Some titles were winners, others meant just for laughs: Gardener's Grub, Horticook, Hort Cuisine, Thymely Treasures, Pots and Pansies, Sow and Stir, Sow and Tell, Grow and Tell, Feasts and Flowers, Vines and Vittles.

bowls in her kitchen, full of rich chocolate smells that swirled around the oven. . . ." One recipe had a handwritten note more people can identify with: "When Mom went back to work, innovation was the key to success so we could have good but easy dinners." Another recipe had a message attached: "Excuse the smudge but my pet pig's snout brushed against the page."

The 'good stuff,' as children call anything towards the dessert end of a meal, is spectacular and according to Jill Evans, has added several inches to her waistline. Nadine Hoffman, former co-owner of the old Higgins Bakery, shared her secret recipe for Amber Pudding, a sinful holiday treat well-known to residents of the Main Line area of Philadelphia. Gainor Roberts, famous for her treats at Flower Show setup, contributed more than 20 recipes including

her Raspberry Walnut Shortbread Bars and vegetable soups that stand supreme as deliciously satisfying meals.

Those who like dinners of soup and bread will appreciate the collection of

Grapefruit Alaska

2 pink grapefruit
 3 egg whites, at room temperature
 Salt and cream of tartar to taste
 ½ cup (or more) sugar
 2 cups vanilla ice cream

Cut grapefruit into halves. Cut around sections with serrated knife, leaving sections in place. Chill in refrigerator. Beat egg whites with salt and cream of tartar in mixer bowl until soft peaks form. Add sugar gradually, beating constantly until stiff peaks form. Scoop ½ cup ice cream onto each grapefruit half; place on baking sheet. Cover top of grapefruit and ice cream completely with meringue. Broil on center oven rack until light brown or bake at 450 degrees for 3 to 5 minutes. Serve immediately. Yield: 4 servings.

homemade breads. A PHS member sent her coveted bread recipe from the former Sam's Bakery in Lafayette Hill, Pa. Landscape designer Alice Doering shares a honey-colored yeast bread that disappears as soon as it hits the table, especially when it's toasted to release the molasses aroma.

Recipe testing, like just about everything else, has entered the computer age. The cookbook printer and coordinator, Favorite

Recipes Press in Nashville, Tennessee, has computer programs that scan recipes to make sure the correct ingredient for something like pecan cookies is a teaspoon of baking powder rather than baking soda, or one cup of flour isn't mistaken for one cup of sugar.

The personal side of recipe testing centered around meetings and parties. Whenever cookbook committee members had a gathering, they would treat those present to a complete menu of new recipes, from unique hors d'oeuvres to Jill Evans's new favorite dessert: Grapefruit Alaska, a cakeless variation on Baked Alaska that she declares unbeatable.

* * *

Spring Violet Salad

8 cups mixed salad greens,
torn into bite-sized pieces
8 sprigs of fresh chervil, torn
8 lemon balm leaves, torn
10 violet leaves, torn
Chopped chives, bronze fennel and
watercress to taste
6 tablespoons olive oil
2 tablespoons rice wine vinegar
1 teaspoon honey
40 violet flowers

Toss salad greens, chervil, lemon balm, violet leaves and herbs in large salad bowl. Whisk oil, vinegar and honey in small bowl until creamy. Drizzle over salad. Top with violet flowers.
Yield: 6 servings.

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When the cookbook began to take shape, we found it was like creating a goulash remembered from last winter. Each member of the editorial committee had a different ingredient she thought was crucial to the final product. If we'd all had our own way, the book would be heavier than Webster's newest dictionary. As it turned out, the book is a 272-page hardback with eight different food sections, ending with "Gifts from the Garden" to squeeze in the Harvest Show winners like Purple Basil White Wine Vinegar, Sour Cherry Relish, and the Slater's Crunchy Sweet Pickles.

The sections start with color photographs depicting the Philadelphia Flower Show, Philadelphia Green's neighborhood greening and landscape programs, the City Gardens Contest, the Harvest Show and other PHS activities, along with a short text describing these programs and events.

Next appears a page of menus that span



photo by Ira Beckoff

One of the Cookbook Committee's responsibilities and perks was recipe testing. This luncheon at the Pennsylvania Horticultural Society headquarters featured the most delicious or the best of all the great recipes submitted.

picnics to banquets. Anyone who has walked around the Philadelphia Flower Show during the days before the Show opens, knows the incredible array of picnic fare that provides tasty sustenance for 12- and 14-hour days of lifting and hauling and planting with no time or place to sit down at a table. Banquet menus come from Joanna Reed who can feed 25 guests on short notice using fresh ingredients from her garden; from Paul Quintavalla who, in his former capacity with ARA Food Services, planned elegant menus for 2,000 guests at the Flower Show Dinner; from the

White Dog Cafe on the University of Pennsylvania campus, and from other gracious hosts. Helpful hints and cooking tips are sprinkled throughout the book wherever space allows.

One of the controversies surrounding the cookbook that will never be resolved is the use of the donor's name attached to each recipe. Certainly Joyce Fingerut's Black Shiitake Mushrooms in Oyster Sauce will appeal to adventurous cooks. But some argue that the recipe entitled Ham and Pasta Casserole might be read less often than if it said it was Joanna Reed's popular

Ham and Pasta Casserole. Similarly, when you know the Armenian Cucumber Soup and Cream of Brussels Sprouts come from multi-talented Roxie Gevjan, you can almost smell the aromas wafting from her kitchen.

In the end, a deference to similar recipes submitted by different cooks (both professional and nonprofessional) the editorial committee decided to put the list of contributors at the end of the cookbook rather than after each recipe.

That donor's list also gets around the sticky problem of attribution. When people were asked to give the source of their recipes, some said the recipes were original, others said they were adapted from friends or cookbooks, and others said things like "this is my favorite recipe; I've had it for years from a faded yellow newspaper clipping, date and name unknown."

* * *

Visually the cookbook is as tempting as the recipes. The cover photograph was conceived by Thom Piccara, owner of Distinctive Floral Designs in Riverton, N.J., and well known to Philadelphia Flower Show visitors as the imaginative designer who created the eye-popping 1993 Arabian Nights display. Piccara and photographer Ira Beckoff contributed their time and considerable skills, putting together and photographing the undulating design of flowers, food, pasta, bread, and cheeses.

Lemon-Pepper Pasta

4 red bell peppers
1 cup minced onion
1 cup chopped carrot
½ cup chopped celery
1 tablespoon olive oil
3 cups unsalted chicken broth
1 bay leaf
1 4-ounce can tomato paste
½ tablespoon red wine vinegar
2 tablespoons lemon juice
Salt and pepper to taste
1 cup heavy cream

16 ounces fresh lemon-pepper pasta, cooked
¼ cup finely chopped fresh parsley, chives or dill

Broil red peppers under broiler until skin is charred; remove to large bowl of ice water. Peel off and discard skins; set peppers aside to dry. Sauté onion, carrot and celery in oil in skillet over medium-high heat for 10 minutes. Add chicken broth, bay leaf and tomato paste. Simmer, covered, for 30 minutes or until thickened, stirring occasionally. Remove from heat; discard bay leaf. Cut red peppers into halves, discarding cores and seed. Process in food processor until pureed. Add to sauce. Stir in vinegar, lemon juice, salt and pepper. Simmer gently. Add cream gradually, stirring constantly. Serve over cooked pasta; top with fresh herbs.

Yield: 6 servings.

Piccara's intent was to reflect a "true garden feeling, a growth pattern of verticals with color variations from light to dark."

The fruit, vegetable and flower collage

used as a border for the menus inside the book, was the artistic brainchild of Sandy Manthorpe with the help of Jane Ruffin behind the camera. Manthorpe was so involved in the project that after a full day of designing and photographing, she put the vegetables from the arrangement in a giant pot and turned it into a soup for volunteers working the next day at the 1993 Flower Show.

The Flower Show soup turned out to be symbolic of the whole cookbook project. PHS members and friends opened their hearts and their kitchens to contribute cherished recipes for a supreme melange. Old and young, hearty eaters and cholesterol-conscious dieters, shared their personal favorites, knowing that the proceeds would benefit PHS's Philadelphia Green Program.

By the end of the cookbook project, everyone involved agreed with the small quote that appears at the beginning of the collection: "To garden, to cook with care, joy and intelligence; to eat with pleasure and serenity. To break bread, to savour a steaming soup or delicate salad — all nourishes and nurtures so much more than just the body."

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While chairing the Cookbook Editorial Committee, freelance writer Anne S. Cunningham discovered new crops to grow in her vegetable garden to create tempting dishes from the cookbook.

Great Recipes from Great Gardeners Cookbook profits will benefit Pennsylvania Horticultural Society's Philadelphia Green, the nation's largest and most comprehensive greening program.

PHS will sell the cookbooks at the 1993 Harvest Show (September 24 & 25) and at the 1994 Philadelphia Flower Show (March 6-13). Or you may use this form to order copies. For more information, call the Pennsylvania Horticultural Society at (215) 625-8250.

To order *The Pennsylvania Horticultural Society Cookbook*

PRICES

\$18 each (plus \$1.26 tax Pa. residents only)
Case of 6 — \$91.80 (plus \$6.43 tax Pa. residents only)
(\$15.30 per book)
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Please mail this form with your check (payable to The Pennsylvania Horticultural Society Cookbook) to:
PHS, 325 Walnut Street, Philadelphia, PA 19106-2777. Please allow 2-4 weeks for delivery, after September 1993.

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The nursery's Main Pond suggests the solitary majesty of autumn. It also shows Robert and Valerie Schultz's unique approach to running a commercial nursery; here they use a planting of *Miscanthus sinensis* 'Silberfeder' to accentuate the preexisting setting of a hardwood forest near a large pond.



A Nature Sanctuary and Nursery:

A nursery that easily matches people with plants



by Christopher Weeks

“Do you know *Eryngium agavifolium*?” asks Valerie Schultz in her best Henry James hostess manner.

It’s a serious question, too, as such party-spawned introductions sometimes are, for Valerie Schultz and her husband, Robert, own and operate The Robert A. Schultz Company, Nature Sanctuary and Nursery. As co-owner she’s developed a deep, personal interest in her plants — and in matching favorite plants with just the right customer.

So when she next looks you earnestly in the eye and says, “Mid-Atlantic gardeners really ought to use more *Knautia macedonica*; it’s a wonderful, underappreciated plant,” you feel she’s politely saying *you* ought to use more of it, so you buy it, take it home, and plant it. And, of course, she’s right for, like the best sort of blind date, within a few hours you know that you and *Knautia* have been destined to go through life together. How had you lived without it all these years?

Despite their relative youth, Valerie and Bob Schultz are old hands at this game for they’ve been using their nursery to happily match people with plants for more than 20 years. They found a 77-acre, second-growth woodland and stream valley tract in north central Baltimore County, Maryland, in 1971, established the nursery, and, as Bob has written, “guided by our mutual reverence for Nature, set out to make Nature’s lessons available to everyone.”

Partial products of the 1960s counter-culture, the Schultzes, Baltimore area natives, decided to eschew their seemingly foreordained paths of college and white collar professional life. Instead they determined to fashion a life together based on “a love of art and a love of nature.” Nearly everyone who grew up in the ‘60s had similar thoughts — Valerie and Bob Schultz,

however, didn’t just think these thoughts; they acted on them.

The couple agreed on the goal — a self-sustaining retail and wholesale nursery that specialized in indigenous plants (and worthy exotics) — and then set out to achieve that end in a determined and methodical manner that (perhaps) suggests Bob’s Germanic heritage.

They spent hundreds of hours scouring the hills north of Baltimore in quest of the perfect site.

“Why spend four to six years in school and another four to six years learning a locale,” he asks. “We knew this locale and we figured we could learn about the nursery business.” And guided by the American nurseryman Richard Simon, they did just that. They first pooled their savings and went to England where they spent several months knocking around, visiting public and private gardens and nurseries, immersing themselves in the writings of such authors as Vita Sackville-West and Christopher Lloyd, and talking shop to every plantsperson who’d listen. “People were wonderfully helpful,” he recalls, “Alan and Adrian Bloom, in particular.”

The trip increased their determination to create, in Bob’s words, “an organized and comprehensive nursery set in a naturalistic environment.” On their return to America they spent hundreds of hours scouring the hills north of Baltimore in quest of the perfect site. “It couldn’t be too close to the city because we wanted an undisturbed natural environment away from developments’ pressures,” Valerie explains, “but it couldn’t be too remote or no customers would find us.”



At top: *Papaver orientale* 'Turkenlouis' and *Nepeta mussinii* 'Six Hills Giant' bask happily together in a sunny rock garden setting. Bottom: Robert and Valerie Schultz keenly appreciate how a few judiciously placed plantings of *Helianthemum* 'Henfield Brilliant' can enliven the rock garden in May.



The sunny display area in early summer becomes a living oriental carpet. This is what one sees while walking from the parking area. The plants in the back of the three retail areas emphasize the plants' varied preferences: sunlovers, partial shade and the full summer shade of the site's hardwood forest.

Near despair, one day they discovered on the perfect parcel, a 77-acre tract about 25 miles north of the city line with interwoven ridges and valleys, springs and streams, deep forest and open meadows, acidic bogs and outcroppings of blue gneiss, quartzite, and soapstone. In short, they found a tract that effectively replicates, in miniature, virtually every Zone 6 microclimate.

So they set to work. Agreeing with Alexander Pope that they didn't want "Nature bare/But Nature methodized," ("we wanted to suggest Nature's possibilities, not duplicate them" Bob says), they knew that even their perfect site needed a bit of tweaking here and there to emphasize its wonderful, natural variety. So they took out a few trees to accentuate the open meadow, subtly redirected a few springs so the water flow would continuously replenish the existing ponds, and added soil or compost or peat or sand as each mini-site required. And because this was to be a commercial enterprise practicality required such features as a covered space for the cash register, a well-drained parking lot, and solid service roads. But the couple managed to integrate these potentially intrusive features into the natural-looking landscape and, indeed, "the more we did the less it looked like we did," to echo Bob's justifiable boast.

At the same time they developed the nursery stock. In this they have resolutely stuck to the simple over the complex, the species over the hybrid, although "some cultivars are just too wonderful to ignore," Valerie admits. And even though they now continuously test hundreds of new varieties to see how each "plant develops and demonstrates its preferences and traits,"

Bob explains, when it comes time to make a final decision about what to propagate—and what to encourage their customers to try—the couple will only keep a hybrid selection if it proves itself and grows without a lot of fuss.

Thus over the years regular customers have been able to watch infant trees and shrubs mature, as some plants have succeeded; and they've been able to watch a few failures, too, and that's fine with the Schultzes, who despite their "reverence for nature" have managed to avoid romanticism. They realize that Zone 6 isn't Eden and that plants do die. Deer can and will decimate a newly planted border overnight; one year an August rain can and will cause a stream to overflow and wash away years' of work; cold, dessicating March winds can and will kill a seemingly healthy *Kalmia* grove; and no one knows what havoc our perforated ozone layer will wreak on gardens 50 years hence. But the couple realize that these are the very troubles that make gardening such a fascinating avocation and that one ought to be up front about the problems as well as the joys of working with the soil. Perhaps it all comes back to the Schultzes' overarching belief in education, in "making Nature's lessons available to everyone."

They've certainly done all they can to help customers choose intelligently for they've turned acres of the property into vast, natural-looking planting beds where virtually everything they offer for sale can be found growing as it might in a home garden. And they've created three distinct retail spaces to further emphasize the plants' varied preferences, one for sunlovers, one in partial shade, one in the full

They've created three distinct retail spaces to further emphasize the plants' varied preferences, one for sun-lovers, one in partial shade, one in the full summer shade of the site's hardwood forest. And not missing an educational beat, Valerie and Bob carefully arrange all the plants in the retail areas alphabetically by Latin name.

summer shade of the site's hardwood forest. And not missing an educational beat, the pair carefully arranges all the plants in the retail areas alphabetically by Latin name: "someone said it's like a big dictionary," laughs Valerie.

The nursery, open from May 1 to October 31, has also become popular as a destination for nature-loving nongardeners and charter buses regularly disgorge visitors from as far away as New Jersey and Virginia. (The Schultzes thoughtfully provide a few shaded tables for picnickers.) But it's the serious trowel-wielders who've turned the place into a center for serious horticulturists. Nowhere else in the Baltimore region can one be sure of finding a half-dozen types of *Aconitum* or 15 varieties of thyme ("we're propagating a few more," Valerie adds, "but we don't have enough of them to sell yet") all growing under ideal natural conditions. Nowhere else can one watch, over the space of a dozen summers, how a favorite *Arundo donax variegata* regularly unfurls its leaves and changes from a diffident pale green pincushion in April to a vibrant, rustling, explosion of striped foliage by August.

And now there's Valerie Schultz, beckoning you towards that alluring *Eryngium*...

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**The Robert A. Schultz Company,
Nature Sanctuary and Nursery**
2311 Blue Mount Road
Monkton, Maryland 21111
(410) 343-0452

Visitors welcome May 1 through
October 31 or by appointment.

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The Good, the Bad and the Beautiful *Plants as Screens in the Landscape*

by Rodney Robinson

photos by Rodney Robinson



Autumn flowering clematis
drapes over a horizontal beam
in this city garden to give more
privacy to the deck area below.

Most residential landscapes require some form of screening. Most commonly, screening blocks out those things we don't want to see. Screening defines property boundaries, creates protective windbreaks, and buffers sound; screens also define space and create appropriate landscape settings for our homes and gardens.

While we can use many available materials for screens, plants have always served us well. In the 16th century, Italian Renaissance Garden designers planted tall hedges and thickets of evergreens, sometimes clipping them severely, to form walls and portals for their "outdoor rooms." A century later, French garden designers like Andre LeNotre worked on a gigantic scale using whole forest edges to form distant vistas and enclose expansive parterres. More recently, English gardeners used massed plantings of flowering shrubs as background for perennial borders.

Growing conditions

Before you begin to select plants for screening, know the growing conditions on your site. What are the soil characteristics? Are the soils well drained? Are they deep or shallow, rich or poor, acid or neutral? See

what else is growing nearby for clues. Is the site exposed to winter winds or protected? Is it shady or sunny? Any one of these conditions could determine the plants' success or failure.

How many times have I seen white pines planted as a screen in the shade of taller

The green mass of the arborvitae would break the continuity of the fence and provide a dark cool color at the rear of the garden, suggesting a deeper space than we really had. In this case I was clearly screening the screen!

canopy trees. The pines struggle to survive the low light conditions and their weak and light foliage offers almost no screening effect. Evergreen plants grow well in partially shady to shady conditions. Canada hemlocks, an obvious choice, require close watch as they succumb more and more to the adelgid infestation. American holly, another good choice, does well in a variety of growing conditions, although it grows slowly and requires patience. If an evergreen shrub will do the job, consider planting rosebay rhododendron, yew and holly

varieties, Japanese andromeda, mountain laurel or the evergreen spreading euonymous. If year-round screening is not required, consider such understory deciduous trees and shrubs as spicebush, witchhazels, redvein enkianthus and American dogwood.

Available space

The amount of space available for planting significantly affects the type of screen we choose. Most evergreen trees eventually grow to widths of 15 to 20 feet and more. If you wish to break up the monotony of a continuous line by staggering the placement of trees, the screen will require that much more room.

Fortunately, many narrow evergreen trees are suitable for screen planting. American arborvitae, commonly available at a reasonable price, makes an excellent hedge, whether clipped or not. Another outstanding narrow conical evergreen is the Yoshino Japanese cryptomeria. This cryptomeria has fine-textured evergreen foliage and maintains its rich green color, even in the lower branches — something to look for in a good screening plant.

Unless the garden setting calls for a formal hedge effect, I prefer screens com-



A hedgerow constructed from plants taken from abandoned fields, undeveloped lots or land soon to be developed, gives an immediate look of maturity and permanence and will continue to fill in as time passes.

Screening Can Improve the Viewer's Perception

drawings by Rodney Robinson

Planting closer to the viewer can provide the same screening ability as larger plants planted farther away.



Sealing the planted edge creates a more solid effect.



Varying the placement of plants will vary the character of the screen edge.



Pulling the understory back can suggest greater depth to the edge.

posed of staggered plantings. This approach, when you can afford the space, creates a sense of depth and variety within the screen itself, thereby avoiding a "walled effect." As a bonus, you also have an opportunity to introduce small flowering trees and shrubs in the spaces between the primary screening plants.

For example, I was asked to suggest a screening solution along an entrance drive that passed by a house the owner wanted to screen. Upon inspecting the site, I noted some American holly growing in a "naturalized" clump near the drive entrance. The area along the drive requiring screening was planted with several large beds of oakleaf hydrangea. While very attractive in summer flower, the hydrangea offered almost no screening effect. There was, nevertheless, abundant space for plantings.

Using the existing holly and its informal setting to set the tone, I suggested additional plantings of naturally formed American hollies in varying sizes and in seemingly random locations along the drive. In fact,

we carefully worked out their locations and picked sizes large enough (some over 10 feet in width) to block all views of the house from the drive. The oakleaf hydrangeas were temporarily removed, then

The effect was immediate; within several days we had an instant mature-looking hedgerow that altered the scene with a look of permanence.

replanted to create several large groupings between and in front of the hollies.

The overall effect was to screen the house completely with plantings that complemented the existing setting and created a sense of privacy for the entry drive.

In urban garden space is at a premium and the gardener doesn't have the luxury of creating richly layered tree and shrub compositions. I find a more two-dimensional approach can be very successful. Many flowering trees and shrubs, like viburnums, firethorn, American dogwood and assorted

fruit trees can be espaliered on lattice or wire. While those options don't provide complete screening, they are often effective enough to turn your attention away from an undesirable view.

I recall one city garden where the primary outdoor living space was a wooden deck that occupied the area between the owner's house and the adjacent neighbor's rear yard. A six-foot fence was erected for privacy from the neighbor's yard, but the deck was still substantially exposed to view from the neighbor's second floor windows. Also, the view toward the neighbor from the deck looked on an unattractive portion of the rear of the neighboring building. There wasn't enough width to plant a hedge of any kind and extending a substantial trellis or solid fence would provide too heavy an appearance. We solved the problem by running a high horizontal beam above the fence to outline the margins of the deck. Wire strands were then stretched between the top of the fence and the beam to form a diagonal lattice. Autumn flower-



In the Terry Shane Garden of the Scott Arboretum on the Swarthmore College Campus, the trellis provides an architectural edge to define the space while allowing people to see through to the other side.

ing clematis was planted at the fence posts and trained to grow up and into the lattice. This particular vine reaches up to a horizontal member and then fills out to form heavy "bundles" of vegetation hanging over the beam. The vine masses softened the view of the neighboring house and displayed spectacular white flowers in early fall.

Where complete privacy and/or security is required, consider solid fences and walls. While these architectural solutions can be very beautiful, they can also be very expensive. For a less costly approach, I have sometimes relied on planting fast growing hedge plants, like common privet or forsythia very close to a chain link fence. The fence becomes "eaten" by the hedge and disappears from view. For best results, I suggest painting the fence fabric and posts flat black and removing the top horizontal pipe rail and replacing it with a thin steel cable. Weave the cable through the top of the chain link and tighten with a turnbuckle to stiffen it.

If you loathe any kind of wire fence, as some do, consider combining a modest-costing wooden fence behind a planting of deciduous shrubs or multistemmed small trees. The silhouette tracery of the branches breaks up the sterile uniformity of the wooden fence behind and adds a sense of depth to the whole edge. Also, the deciduous character of the planting provides a seasonal variation the fence would otherwise not have.

I can recall being asked to design a small garden within a back yard surrounded by a brand new six-foot wood privacy fence. The owner didn't find the fence attractive, but neither did she like my suggestion of taking it down. So, I needed a quick alternative solution. The space was a rectangular one, and I suggested planting a small evergreen hedge of American arborvitae (available and inexpensive) across the back wall. The green mass of the arborvitae would break the continuity of the fence and provide a dark cool color at the rear of the garden, suggesting a deeper space than we

really had. In this case I was clearly screening the screen! I then broke up the linear side fence sections with several plantings of mixed shrubs. The species selection was not as important as the fact that they were varied evergreen/deciduous, some small, some large. This effect allowed the owner to see some of the fence, but only in pieces. By the time we finished, the fence looked pretty good.

Location can mean everything, for the closer you are to the screen the smaller it can be and still be effective. For example, imagine sitting in a chair on your patio looking toward your neighbor's house. Now imagine a fence or screen at the edge of your patio. Estimate how high it would have to be to completely block your view of the neighbor's house. Now imagine a fence or screen right next to that house. Now estimate how high it has to be. To be effective there, this screen would have to be as big as the house itself. Placing the screen nearer to the viewer provides a greater palette of plants to select from because you



Massed forsythias at the edge of the woods seals the woodland edge and screens our views to properties beyond.

can now consider using shorter trees and shrubs.

What is the desired effect?

Once you understand the growing conditions and are aware of the available space, ask yourself what effect you might want to create. Don't think of just one, but try to identify as many options as you can so you have a choice.

Consider the setting. Are you working in a manicured ornamental landscape with a human inspired geometry, or are you in a more natural setting where a woodland edge with layers of canopy, understory and herbaceous plants would be more appropriate. I have established effective backyard screens in a country setting by placing red cedar in varying sizes among clumps of staghorn sumac, native viburnums and an occasional American dogwood. The ground was planted with a mixture of grasses, including little blue stem, to create an old field look. The red cedar, if placed properly, can provide effective screening, and yet still maintain a relatively open feeling.

In a more rural setting, a hedgerow can often be the most appropriate solution. I have had several opportunities to create natural-looking hedgerows where screening was needed and a conventional massed planting of evergreens would have looked out of place. In these instances, I first determined the best location for the hedgerow. My decision was based on property lines, the geometry of existing fields, the continuation of an existing hedgerow, and the edge of a path. I then looked for a nearby source of native trees and shrubs that commonly grow in hedgerows. Rather

than using nicely formed nursery stock, I was looking for plants growing in abandoned fields, undeveloped lots, or land soon to be developed and therefore soon to be cleared. Usually the plants in areas like these can be had for every little money. The plants included black cherry, black locust, sassafras, American dogwood, red cedar, tulip trees and others. I looked for large quantities to choose from in varying irregular shapes and sizes.

Next, I acquired the services of a tree spade and operator and for several days we moved trees. We transplanted many varieties, placing them as closely together as we could, with a bump and a wiggle here and there along the proposed hedgerow line. The effect was immediate; within several days we had an instant mature-looking hedgerow that altered the scene with a look of permanence.

What is the nature of the space to be screened? Is it expansive and outward looking, or is it a smaller outdoor room, enclosed and introspective? At the Terry Shane Garden of the Scott Arboretum in Swarthmore, I designed a terraced garden very much in the scale of an outdoor room. The main terrace was laid out on axis with the garden entrance, just off the classroom. Beyond the end of the terrace were several very large shade trees and beyond them a large building facade. The garden terrace required an ending of some kind, but a solid ending did not seem appropriate within the expansive landscape setting. I selected a fairly transparent trellis backed up with several American holly. The trellis provides an architectural edge to define the space while allowing the view to continue through

to the hollies and beyond. The architectural edge offered a formality suitable to the character of the symmetrical garden design as well as the period of the house. The side of the garden, treated in a less formal way, consisted of a mixed perennial border backed up with various flowering shrubs and small trees.

I always pay particular attention to the kind of plants I find already growing in the landscape. As I develop ideas I constantly ask myself if the new plants will complement the existing ones. I believe that if I introduce a different palette or a different form, I risk having the opposite effect, calling attention to itself and what I'm trying to hide.

If the predominant plants are deciduous, consider staying with a deciduous palette. Don't always think that a screen has to be solid evergreen to be effective. Many times I find the mere suggestion of a screen or an edge is enough. I have had success with a planting as simple as a mass of forsythia across a knoll that sealed a woodland edge and provided enough of a screen throughout the year to hide what was beyond. Above all, I believe one should look for appropriate solutions.

Rodney D. Robinson, RLA, has designed both private and public gardens in the Delaware Valley for over 15 years. He is a registered landscape architect and principal in the firm Coe Lee Robinson Roesch, Inc., Philadelphia and New York City. Robinson teaches garden design at Longwood Gardens and has written previously for *Green Scene*.



IN THE GARDEN



by Kathleen A. Mills

Blueberries Aren't Just for Eatin' Anymore!

Have you ever planted red cabbage in your garden just because the bold purple foliage looks great next to the soft gray of lamb's-ear (*Stachys byzantina*). Or maybe you've enjoyed growing red swiss chard in your flower bed for the zip its colorful stalks and ruffled foliage add to the garden. Mixing vegetables and flowers in creative ways not only looks great and saves space, but increases interest and productivity in today's smaller gardens. Why stop there.

From the lowbush species (*Vaccinium angustifolium**), which reaches to 2 ft., to the rabbiteye varieties (*V. ashei**), which can reach to 30 ft. in the wild, blueberries can work well in the landscape. When choosing shrubs consider ease of maintenance and appearance. Blueberries get high grades on both counts, and they provide the added bonus of wonderful fruit.

Highbush blueberries

Vaccinium corymbosum is ideal for the home landscape. An array of readily available cultivars fit a variety of height and shape criteria. Each spring the leaves open pale green then begin to darken as the days warm. Delicate white flowers magically turn to green fruit. The fruit ripens to blue. As the fruit ripens gardeners and birds rush to the harvest. In autumn the highbush blueberry turns a vivid red, then the leaves drop to reveal an intricate framework to winter. Does any *Virburnum* do more?

Getting a good start

Blueberries are acid loving plants, members of the *Ericaceae*, a family that includes rhododendrons and mountain laurel (*Kalmia*). They won't be happy as part of foundation plantings where lime leaching from concrete and masonry keeps the soil alkaline. Choose a sunny location and take the time to prepare the soil well. Plenty of peat and sand, to ensure good drainage, will create a nurturing environment for the blueberry's fibrous root system. Once established yearly pruning and soil amendments will keep plants thriving.

Pruning

New plants won't need pruning the first three years in the garden. In late winter of the third year and each winter thereafter, prune out the oldest, twiggiest branches to the ground. Also prune out all but two of last year's suckers and any canes growing

too close to the ground. Leave six to eight canes on each bush.

Soil amendments

Aluminum sulfate applied yearly at the base of the bush will help to keep the soil acidified. Use soil tests to ensure that the pH is between 3.5 and 5.5. Cultivate carefully, not to disturb the root system.

Watering

In nature blueberries grow in moist areas, so they have evolved a shallow, fibrous root system to live efficiently in this niche. In the garden, we need to pay special attention to their water needs, especially if it is dry during the time of berry formation.

(For detailed cultural information see *Green Scene*, July 1982, *Small Fruits*, Jane Pepper, page 10.)

Berries

Cross-pollination is essential for good production, so plant at least two cultivars of blueberries. Choose cultivars from early and midseason varieties or from mid- and late-season types to increase production and expand your harvesting period.

With little care blueberries will soon be among your favorite garden plants. Underplanted with thyme (*Thymus* spp.) or flanked with columbine (*Aquilegia canadensis*), blueberries will enhance your garden year-round.

Blueberry Facts

	Lowbush	Highbush	Rabbiteye
Height	to 2 ft.	4-10 ft. Cultivar related	to 30 ft. in the wild
pH	4.2-5.2	3.5-5.5	4.2
Habit	Groundcover	Shrub	Can be kept pruned to manageable height
*Hardiness Zone	4 - 7	4 - 8 Cultivar related	7 - 10 Cultivar related More drought tolerant

Highbush Cultivars

Name	Zone	Season	Habit
Bluecrop	6 - 7	Early	Upright
Earliblue	5 - 8	Very Early	Upright
Jersey	6 - 8	Late	Large, Spreading
Herbert	5 - 8	Mid-season	Compact

Sources for Highbush Blueberry Plants

Allen Plant Company
P.O. Box 310
Fruitland, MD 21826-0310
(410) 742-7122
Catalog Free
M. Worley Nursery
98 Braggstown Road
York Springs, PA 17372
(717) 528-4519
Catalog Free

Books*

All About Growing Fruits and Berries, Ortho Books, ed. Will Kirkman, Chevron Chemical Company, San Ramon, CA, 1976.
Backyard Fruits & Berries, Diane Bilderback & Dorothy Hinshaw Patent, Rodale Press, Emmaus, PA, 1984.
How to Grow Vegetables and Berries, Sunset Books, Lane Publishing, Menlo Park, CA, 1982.
*These books are available on loan to members from the Pennsylvania Horticultural Society's Library.

*If you are successfully growing lowbush blueberries as a groundcover in the Philadelphia area please contact the author at the Pennsylvania Horticultural Society, 215-625-8250.

Problem Soils

Your soil is one of your major natural resources, so treat it kindly

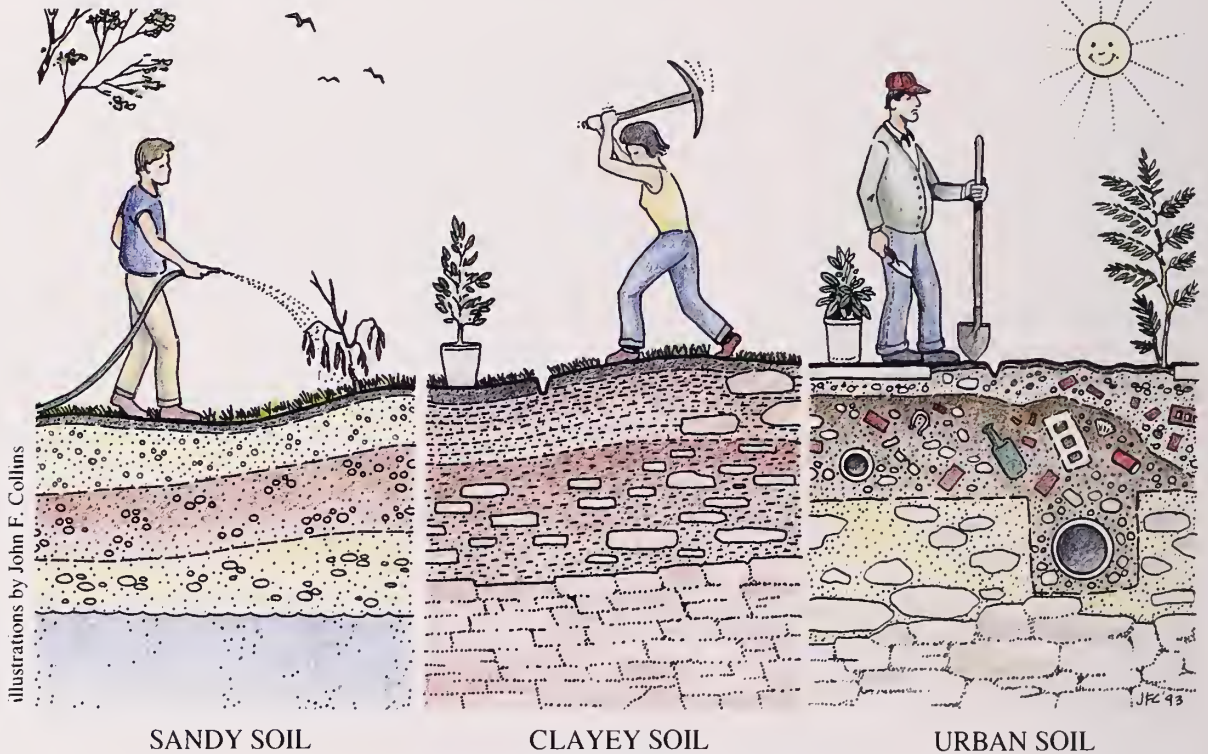


by Sarah A. Willig & John F. Collins

To produce a successful landscape or garden, no investment of your time, effort or money is more necessary than that expended to properly prepare your soil. The plants that form your land-

scape will depend on the soil for water, nutrients, oxygen, support and overall health and appearance. Unfortunately, people often give this major step in the landscape process the least attention.

Problem Soils



SANDY SOIL

CLAYEY SOIL

URBAN SOIL

Problem soils include those that occur naturally, but have unsuitable characteristics for the plants you want to grow, or they may be soils damaged during suburban and urban development. Sandy soils of the Coastal Plain, clayey soils of the Piedmont, and urban soils all qualify as potential problem soils in need of amendment for most plantings.

Although soils appear to be static, they are really living systems. The ideal soil is a combination of 25% water, 25% air, 45% mineral material and 5% organic matter, both living and dead. Retaining the 50% air and water space seems to be the most difficult, as our 20th century society has become the greatest "compactor" in history. Numerous processes that add, remove and transform material, operate in soils. The

nature and balance of soil processes depend on the interplay of the five soil-forming factors: climate, parent material, topography, biology (including human activities), and time. For a given soil, the natural layers, or horizons reflect the balance of soil-forming processes. Manipulating these processes to create the appropriate moisture and nutrient conditions is the essence of farming and gardening.

Soils become problematic when you attempt to grow species intolerant of existing conditions. We've presented here for each soil type, solutions and associated trade-offs to these problems.

It's almost always preferable to amend existing soil rather than to import top soil, which usually contributes to the destruction of another piece of land. There are three basic ways to improve existing soil quality:

1. Till and mix soil amendments into the top 8 inches.

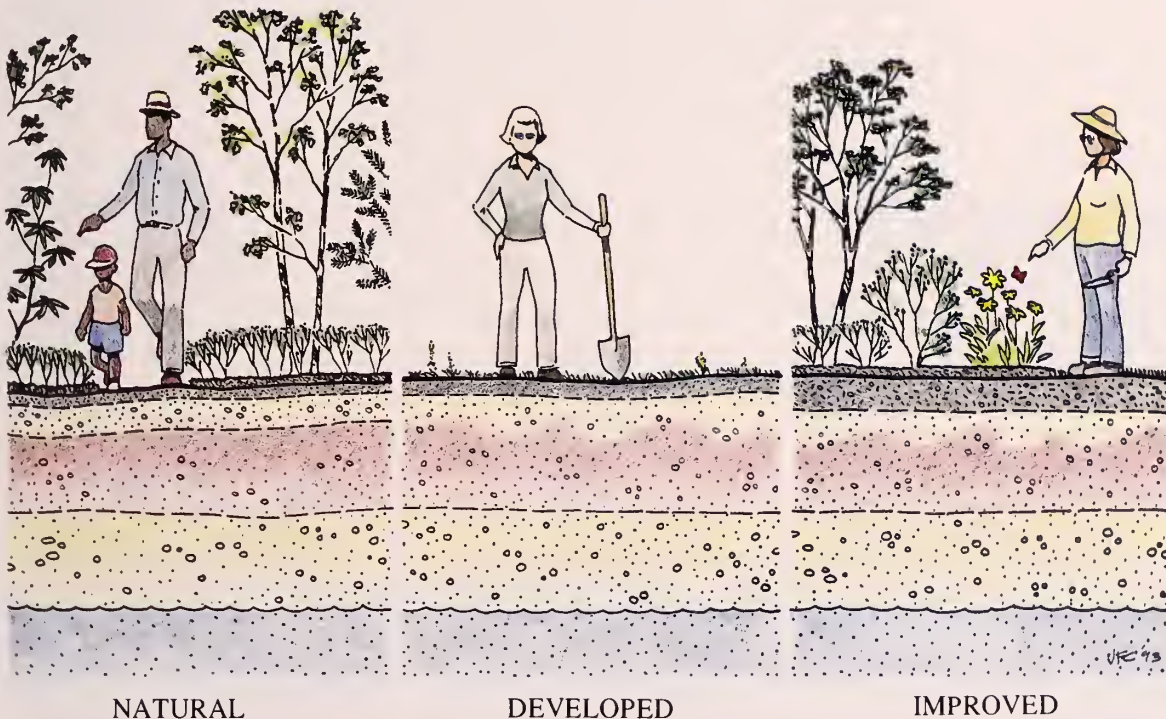
A useful method for building a turf

grass lawn, meadow, vegetable garden or plant bed on open ground; not practical close to existing trees or plantings, as root damage would result.

2. Aerate and top-dress with amendments. Mechanical aeration, either by machine or digging fork, works well around existing trees and shrubs; especially beneficial for compacted soils.
3. Surface applications of amendments. Surface applications alone can be useful where potential erosion, low soil moisture and good aeration exist.

The 21st Century City will require major changes in urban soil management and horticultural practices if we are to establish and maintain a healthy urban landscape.

Sandy Soils



Sandy soils naturally occur in many areas, but are widespread in the Pinelands of New Jersey. Here, they develop in the Cohansey sand, a quartz-rich parent material. The droughty, acid, nutrient-poor soils support a mix of oak, pitch pine, blueberry, and huckleberry. Bracken fern, teaberry and ground heather compose a sparse herb layer. In marginally wet to wet areas, the forest floor thickens and the shrub layer increases in height, density, and diversity. Highbush blueberry, fetterbush, staggerbush, maleberry, swamp azalea, sweetbay magnolia, and winterberry holly are common associates along stream corridors.

The best practical, low-cost approach to gardening on the sandy Pineland soils is to use the native species already adapted to the adverse growing conditions. To determine the appropriate plant palette, visit a

local natural area such as a park and find a suitable biological "benchmark" in terms of light and moisture conditions. You can then generate a species list and a landscape planting design based on the plants in the

continued

natural study area. Purchase plants from responsible nurseries specializing in native species that have been grown from seed or cuttings and not collected from wild populations.

If the natives are not to your liking and you want more exotic plants, then the struggle to overcome droughtiness and low fertility begins. There are at least two solutions to the "water problem." One, simply water more often and, possibly, switch to sprinkler or drip irrigation methods. A second solution: add clay or organic matter, which both hold water. Adding clay can be quite expensive and would not be suitable for large areas. Adding organic matter to well-drained sands is a short-term solution, as the good aeration promotes rapid decomposition. Manures and sewage sludge are relatively inexpensive and locally available. Potential problems are the high pH of most manures and the heavy metals in sludge.

To improve the fertility of sandy soils, add leaf compost, lime, and a balanced organic fertilizer and till to a depth of eight inches. The leaf compost will release some

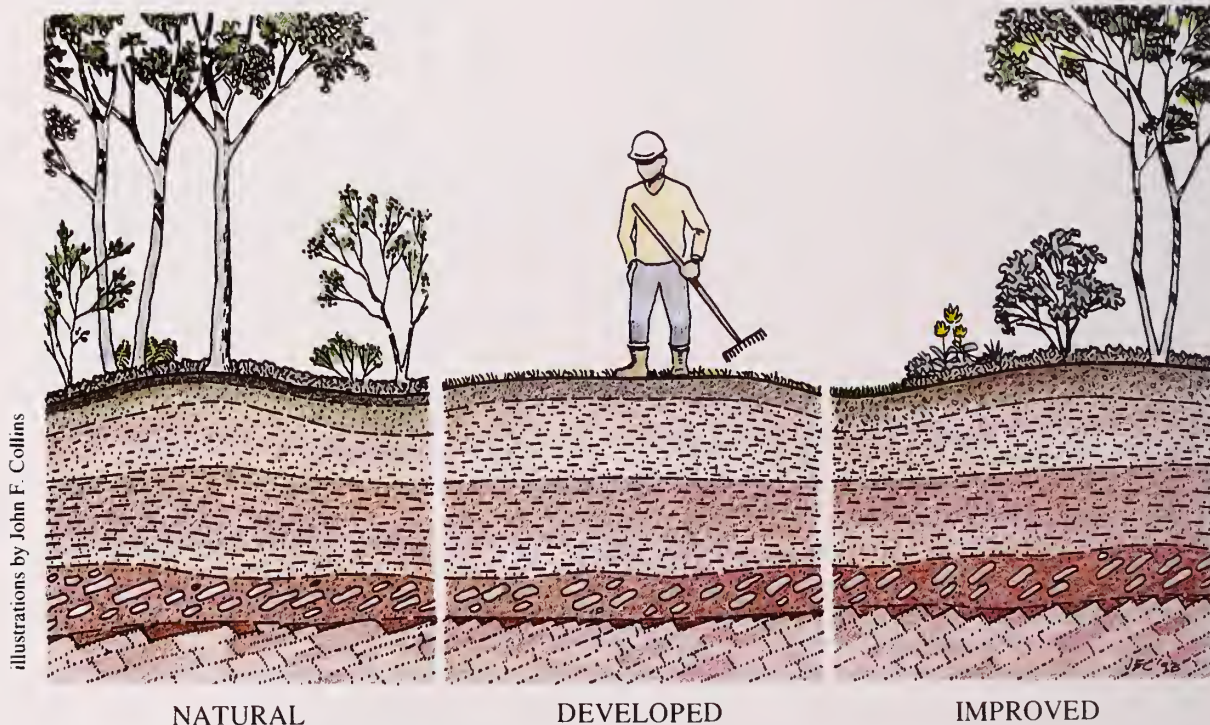
nutrients and break down to form humus, which will hold nutrients and improve soil structure.

Adding lime will raise the pH and increase the availability of nutrients tied up at lower pH values. To raise the pH of sandy soils from 5.5 to 6.5 requires approximately 65 pounds of lime per 1,000 square feet. To prevent an overdose, limit applications to 40 pounds per 1,000 square feet, at any one time.

Nitrogen, an essential nutrient in short supply in sandy soils, should be added at a maximum rate of two pounds of nitrogen per 1,000 square feet.

To determine the amounts and rates of fertilizer application, follow supplier's directions on the packages or consult with a local horticulturist or Soil Conservation Service agent. It's important to apply proper amounts since chemicals can readily pollute the groundwater supply. Using low-strength organic fertilizers insures minimal damage. Bear in mind that these activities in the garden influence the health and well-being of the surrounding environment.

Clayey Soils



Clayey soils, characteristic of the Piedmont, develop on a variety of rock types including granite, gneiss, shale and limestone. The clay comes from the alteration of primary minerals such as feldspar and mica, common in granite and gneiss. The clayey soils derived from limestone weathering represent the "dirt" entrained in the limey sediments and persist after the limestone dissolves and leaches away.

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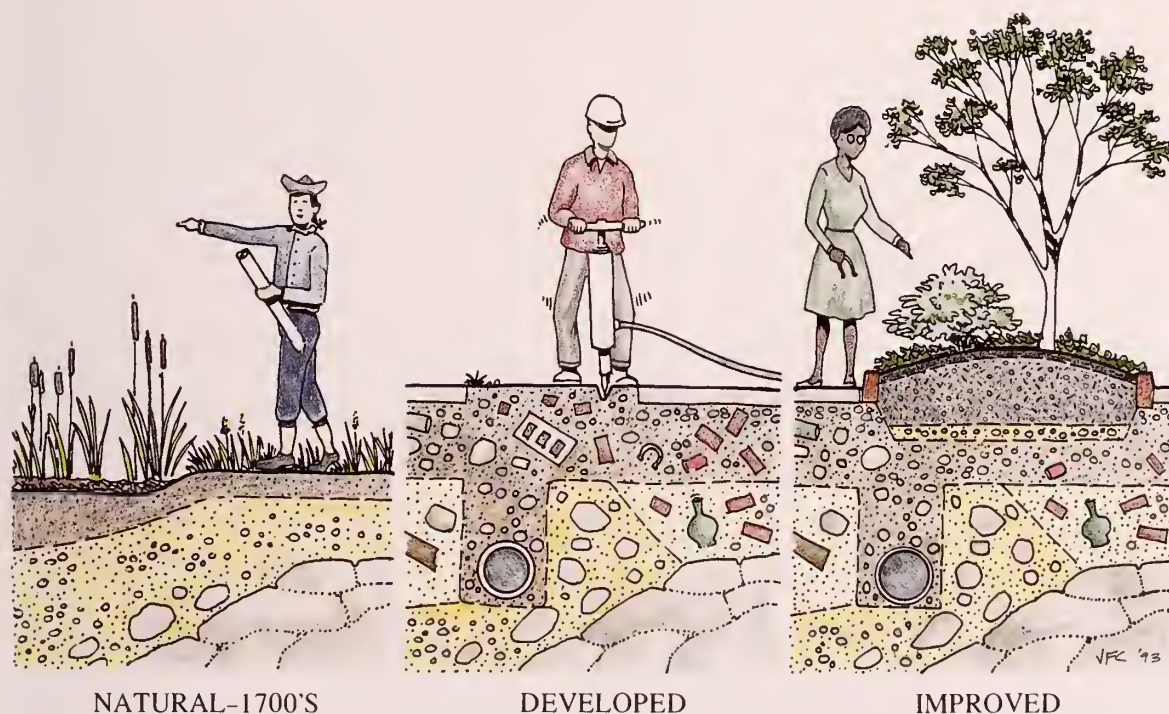
The presence of clayey subsoils in the Piedmont permits the growth of more water- and nutrient-demanding species than those found in the Outer Coastal Plain. Where clayey soils severely impede water movement, wetlands develop. Red maple, box elder, silver maple, spicebush, and jewelweed are common constituents of floodplain wetland swales where deposits of clays have caused poor drainage. Until recently, wetlands were not protected and many were built on. Today, numerous suburban homeowners are frustrated by the poor drainage of their yards, because in some cases they were formerly wetlands.

In the developed suburban environment, land not paved, roofed or otherwise covered, is often severely "squashed" or compacted by construction and maintenance equipment, traffic and play. Many residential developments are built on clayey soils and are in serious soil trouble. If compacted when wet, clay soils can be virtually destroyed, because water and air no longer have adequate pore space. Use the old rule of thumb to determine if soil is suitably dry

for working: form a ball of soil, then squeeze it. If it crumbles, it's ready; if it doesn't, wait. Scheduling the unavoidable movement of heavy equipment across a lawn or forest floor during very dry or frozen conditions can also help reduce compaction damage.

During normal construction, the site is often stripped of natural topsoil, severely compacted and poorly graded. The lack of organic matter found in the thin layer of installed topsoil reduces the soil's ability to retain nutrients and water. Good soil structure, aggregation of soil particles, which promotes the infiltration of water and diffusion of air is also lost in the topsoil stripping process. Poor site grading encourages erosion, puddling, and loss of soil structure. To improve soil structure, apply organic matter and, if needed, coarse sand and mix into the top 8 inches. Loosen the soil either by tiller or digging fork, and grade for drainage. Keep in mind that tree roots usually extend far beyond the "drip line," so be careful when tilling.

Urban Soils



Most urban soils, except protected forest parkland, have been formed by man's activity and are no longer "natural." This has been done on both a large and small scale over the last 300 years. Entire neighborhoods have been constructed on filled or "made" land, such as Boston's Back Bay and much of South Philadelphia. On a smaller scale, every building, utility, street or sidewalk construction project excavates, fills, compacts, and pollutes, by adding its share of non-natural solids such as glass, mortar, metal and masonry to the site. Construction activity also mixes all these ingredients, destroying whatever might have remained of the natural soil horizon layers.

continued

Urban Soils

The 21st Century City will require major changes in urban soil management and horticultural practices if we are to establish and maintain a healthy urban landscape.

The characteristics of a good, natural soil are all missing in most urban soils. Among these are adequate aeration, drainage, water-holding capacity, organic matter, adequate nutrients, gas diffusion and a rich microflora and fauna, necessary for the breakdown of organic matter. The urban soil scene also includes severe compaction, poor drainage or drought, intense heat, high alkalinity caused by leaching from mortar, lack of nutrients and organic matter and chemical pollutants such as de-icing salts, window and car washing detergents and oils.

These conditions often render the urban soil virtually unusable without major corrective work. The presence of a waterproof or "hydrophobic" surface crust on urban soils* formed by petroleum-based air pollutants and compaction also contributes to a lack of adequate oxygen and soil moisture in the city.

The removal and replacement of the top 8 to 24-inch-deep root zone with suburban/agricultural farm soil is, as stated earlier, both expensive and environmentally harmful.

In all cases, a soil test to determine the pH is the most important of all the available tests. Urban soils will usually test in the 7 to 8.5 pH range, at least one full point, or 10 times more alkaline, than most woody plants wish to grow in. To lower the soil reaction (pH) to 6 or 6.5, apply 80 to 100 pounds of sulfur per 1,000 square feet and work into the surface. **Note:** Be careful when using processed sewage sludge, spent mushroom soil, wood chips, or leaf compost from city streets' trees, as all are likely to have a high pH! Compost from predominantly oak and beech leaves or pine needles is more acid and, therefore, better if you can find a local source.

Poorly drained problem urban soil can usually be remedied one of three ways:

1. Install an underdrain, using a 4-in. perforated plastic pipe. Place in a 15 to 18-in.-deep, gravel-filled trench under the plant bed and slope at 1/4 in. per foot to a dry well or French drain, a pit 3 ft. to 4 ft. in

*Urban Soil in Landscape Design, Phillip Craul, 1992.

diameter, 3 ft. or 4 ft. deep, filled with coarse, crushed stone or inorganic debris such as brick, masonry or cinders. (A good way to get rid of the rubble you find.) An alternative technique is to use a post hole digger to make several mini-wells, as deep as possible, also filled with crushed stone or rubble.

2. Raise the level of the planting area by means of a curb, edging or soft mounding so that you gain 6 in. or 8 in. of added depth above a well-prepared existing soil area.

3. For small areas, recreate the composition of your soil by adding organic matter and sand in sufficient quantities to improve drainage, provide good aeration and water holding capacity. To rebuild your soil, start by digging the entire area to a depth of at least 8 in. as you would a vegetable garden. For small areas, this is best done by hand with a digging fork, as most rototillers will

One new technique to provide extra root space is to design the area beneath newly constructed sidewalks to include continuous trenches filled with planting soil to connect tree pits. Philadelphia's East Market Street is a recent example of this approach.

not reach the desired depth on severely compacted soils. Add a 1-in. layer of coarse sand (often called concrete sand) and a 2-in. layer of leaf compost or peat moss. Add any required sulfur (or lime) and a balanced organic fertilizer (such as Holly-tone for plant beds and ground cover) at the recommended rate. Re-dig and mix all the "goodies" the full depth of the previous digging. A rototiller will work well for this operation. Regrade to have positive surface drainage. At least 1/4 in. per foot slope is needed.

Where no existing soil is present, you can prepare your own soil for small planting areas or containers; 1/3 peat, 1/3 sand and 1/3 "imported" soil or compost will generally work well for most plantings. Commercially produced "soils," like Pro-Mix, are also available at garden centers.

Maintaining a 2-in. to 3-in.-deep mulch of leaf compost or shredded bark on the finish-graded plant bed keeps the soil cool in summer, warm in winter, retains

soil moisture and prevents erosion.

Keep in mind that tree roots do not need soil depth as much as surface soil area. Allow as much space as possible for tree pits. Most street trees are severely stressed, caused in large part by the excessively small pits that imprison their roots. According to North Carolina University's Dr. Tom Perry's research, almost all tree roots are in the top 18 to 24-in. soil zone. One new technique to provide extra root space is to design the area beneath newly constructed sidewalks to include continuous trenches filled with planting soil to connect tree pits. Philadelphia's East Market Street is a recent example of this approach. Where paving is necessary, using "porous" brick or stone paving over the tree root zone, permits some air and moisture to penetrate the soil.

Your local County Agent at the Agricultural Extension Service is always a good source of information, as is an experienced, qualified landscape contractor, horticulturist or landscape architect.

Perhaps the most important consideration in dealing with "problem" soils is that each soil type can support only specific natural plant associations and introduced plants with similar characteristics. The attempt to grow upland plants in a poorly drained, heavy clay soil or to grow wetland species on a dry, sandy site is both illogical and wasteful. Dependence on intensive irrigation for a successful landscape is another example of "fighting" with nature.

As is true with all landscape design and management decisions, working with the forces of nature is always the most rational approach. Your soil is one of your major natural resources, so treat it kindly. The efforts required to achieve high quality soils will pay valuable dividends in the lifespan of your landscape.

John Collins, ASLA, a landscape architect and horticulturist, chairs the Landscape Architecture and Horticulture Department of Temple University/ Ambler Campus. Collins is president of The Delta Group, a Philadelphia design company.

Sarah A. Willig, Ph.D., divides her time between wetlands consulting and teaching. Willig teaches geology at the University of Pennsylvania and about soils at Temple University/Ambler Campus.



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NAME OF CHAPTER AND SOCIETY: _____

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Dates	_____	_____
Time	_____	_____
Location	_____	_____
(full address)	_____	_____
	_____	_____
Fee, if any	_____	_____
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photo by Jackson Photography



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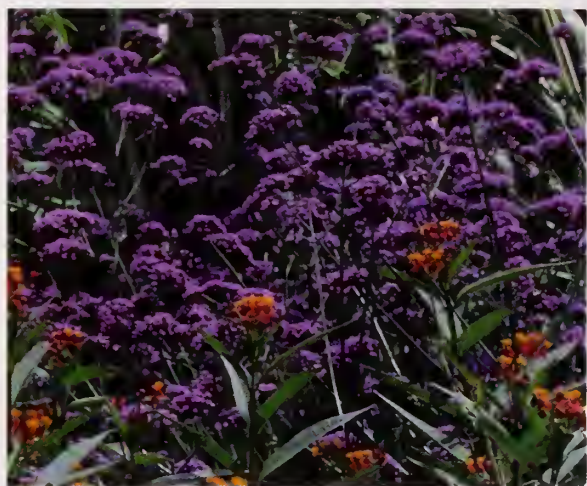
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Tree Rescuers. See page 26.



24.



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Front Cover: Up and away . . . Christ Travis directs the crane as it lifts a three-and-a-half-ton root ball of a cutleaf Japanese maple (*Acer palmatum* 'Dissectum') from its old home, a first step on its way to the Philadelphia Zoo.

Front cover: photo by Mike Schwartz



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Volume 22, Number 2 November/December 1993

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The Perfect Season for Reading and Giving BOOKS

by Jean Byrne

Recently, my friend George, befuddled and trying to figure out the chemistry of a new relationship, said to me in wonderment and with mild exasperation: "We have *nothing* in common. She doesn't even have a single book in her house."

I understood his concern. Books are counselors, friends, teachers; they bring us news of the world; they add an extraordinary dimension to our lives; they can be an index to our wisdom and empathy. In fact, books are so powerful they can even change our lives.

I remember when a friend read several of May Sarton's books she decided to quit her job of seven years, sell her Philadelphia home and move hundreds of miles away to become a hands-on gardener.

Books can bring serenity and laughter. One of the happier Sundays I've spent in years was at Richard Bitner's farmhouse in front of a woodstove in his sun-drenched, book-lined living room, taking turns reading aloud to one another from Cleveland Amory's enchanting book *The Cat Who Came for Christmas*.

Books are the bulwark of our friendship with so many people. Richard will call to read a paragraph from Henry Mitchell or Michael Pollan or to rave about the text and photographs in Allen Lacy's *Autumn*. Julie Morris will call from New England to share a paragraph from Sue Hubbell's *A Country Year*.

Books can help to heal. A colleague, wheelchair-bound for six months as she recuperated in the country from an automobile accident, turned to books for their companionship as well as their reservoir of wisdom, solace and discovery, after she

tired of studying the garden or pruning the brilliant plants in the window boxes and containers that so generously surrounded her.

So it was with enthusiasm that I greeted Richard's suggestion that he query people about the books that had influenced in some way their gardening tastes or interests and write about their choices for this issue of *Green Scene*. Richard believed he would find that some of the influencing books were not written by garden writers and were not how-to descriptions. And he was right: after querying 34 gardeners, he was astonished to receive 29 replies, among which were answers as disparate as Louise and James Bush-Browns' *America's Garden Book* and Virginia Woolf's novel *Orlando*.

The people who replied so obviously savored the questions and considered so seriously their responses that Richard was confirmed in his opinion that books rank high on the list of the indispensable in these people's lives, not only materially, but especially in terms of the spirit. We hope you will read these generous sharings from a group of passionate gardeners, to whom the next best thing about gardening is reading about it or writing about it.

You may not find a favorite on this prodigious listing of books on pages 16 to 23. If you have in mind a book that powerfully influenced your perspectives about gardening, whether on the shelf under gardening or literature and not listed here, drop me a line. Perhaps we'll continue the dialogue in a later issue. Be sure to include the name of the book, author, publisher, city and date.

Excuse me, I've got to go. I've got a date with a terrific book.

The Homestead Year

(Part I of a two-part series)



by Judith Moffett

For a long time I'd been deeply attracted to the unfashionable concept of homesteading: a life of self-sufficiency on a modest rural holding, with a vegetable garden, an orchard, a wheatfield, bees and poultry, perhaps some goats. But since circumstances required me to live within a reasonable commute of West Philadelphia, I gardened modestly in the suburbs and daydreamed about buying a place in the country "someday."

Then I had my brainstorm: I could go back to the land where I was, right here in Delaware County. For one entire calendar year I would turn my one-acre lot into the best homestead it could be. What follows is a sampler of that "self-sufficient life on a modest 'rural' holding," excerpted and condensed from the journal I kept throughout the Homestead Year of 1992.

February 14

(A week earlier I had bored three holes in our thick-boled Norway maple, hammered in three metal spiles [spouts], and hung three buckets. Several warm days and cold nights ensued — ideal weather for making the sap run. I'd boiled once already, several days before.) My goal for this day was to boil a roasting pan full of sap — about three gallons, one from each tap — down into maple syrup.

One by one I unclipped the lids, unhooked the buckets, and hauled them, with their solid-frozen contents, to the fire circle in the middle of the back yard. The bottom of the roasting pan had not been cleaned from Sunday's boil and was crusted with soot on bottom and sides, but it was already 1:30, and I knew I'd be lucky to finish by dark. So after getting the fire going well I carefully dumped two of the big rounds of frozen sap into the pan and just set it back over the flames, edges resting on the cinder blocks I'd put there on Sunday.

Once the fire was well underway and the sap beginning to melt in the pan, action slowed to a crawl and life attained, for this little while, a beautiful simplicity. During the next four-plus hours there was virtually nothing I had to do except keep the fire well-fed on the trash wood we save for the purpose, and circle round and round the pan and fire to escape the smoke. As the white nitre in the sap foamed to the surface, I would skim it off with a slotted spoon.

I stood in the warming day, mesmerized first by smoke and flames . . . and then, gradually, by steam, as the sap heated and the big round ice "cubes" melted down. When there was room, I stirred from my reverie and added the third round hunk of ice to the pan.

Time passed. For a long, long while the level of the boiling sap never seemed appreciably to lessen. I meditated a bit on the ethics of burning up so much wood, producing so much CO₂, for the sake of less than a pint of mediocre syrup, but I trade so many energy-conserving practices for the privilege that I genuinely do feel I've earned it.

What snapped me out of my reverie was the realization that my bees were also on the boil. On this first mild day in several weeks they were pouring joyously out of the hive. It seemed as good a time as any to do the spring inspection. By the time I finished and returned to my fire it had burned down considerably, but the coals were very hot and the sap was soon bubbling merrily again above the flames. And now at last the white nitre scum on the sides of the pan showed how the level had dropped, and I could see the first faint hint of yellow in the rolling liquid. It was 4 p.m. I took up my vigil again, stoking the fire, keeping shingles propped on either open side to conserve heat, automatically circling to escape the smoke.

Then for a while I got involved in cutting and clearing brush near the fire circle. The work made time speed up. Before I knew it the syrup was ready to be moved inside, and I had to put down my tools, shuck my gloves, and dash back to the house for a saucepan. Setting this on the ground, I used the gloves to pick up the roasting pan by the handles and pour in the dirty yellow liquid, full of sterilized bark bits and black flecks of fly ash from the fire. Empty, the roasting pan went upside down, one end propped on a rock, and the saucepan with its precious golden contents went inside to the stove.

It was 5:30 and beginning to be twilight.

Feeling wonderful from my afternoon outdoors, I stood at the stove in boot socks and muddy-kneed jeans, cheeks tingling with windburn, and floated the candy thermometer in the boiling almost-syrup.

It got steadily darker outside; the coals through the kitchen window glowed beautifully. Ted offered to go out and douse the fire while I tended to the syrup-making, and I agreed, though it felt like a crime to waste such hot and beautiful coals; it seemed there should be something we could roast for dinner over or under them, turkey franks, potatoes . . . but there wasn't. The syrup was now boiling in such a way that large bubbles covered the entire surface, making it look like a round yellow disk of bubblewrap; at this stage it can easily boil over and must be monitored closely.

At about 6:30, when I squinted through the steam-coated thermometer casing, my best guess was that the mercury read something like 224°. The syrup seemed slightly thicker than the first batch; panicking suddenly to think I might have over-boiled it, I snatched the pan off the stove.

The writer Noel Perrin* had given me a genuine felt maple syrup filter like they use in Vermont: a blunt cone made of thickly felted wool, 15 in. in diameter and 15 in. deep (after washing), with four tabs to hang it from.

My problem was that I had maybe a cup, maybe a little more, of syrup to pour into this 15 in. felt cone. I turned the top foot of

*By Noel Perrin, *First Person Rural* (1978), *Second Person Rural* (1980), *Third Person Rural* (1983), *Last Person Rural* (1991), all published by David R. Godine, Boston, MA. Some of these are available to members through the Library of the Pennsylvania Horticultural Society.

continued

The homesteading year begins in February with the tapping of maple trees for syrup-making. (**Left**) Trees over two feet in diameter, like this Norway maple, can handle three taps without being weakened. Lids, clamped onto the buckets' sides, protect the sap within from rain, snow, and bits of falling bark. (**Right**) A hole has been bored several inches into the wood and a spout, or "spile," hammered in. A metal hook holds the bucket, which collects the sap as it drips from the spile. The sap in the bucket has frozen solid during the night. (**Bottom**) Tended by the author, rounds of frozen sap melt quickly over a briskly burning fire. It will be hours before the liquid sap has boiled down into syrup.

photos by Judith Moffett



photo by Liz Ball



filter back like a gigantic cuff and positioned the blunt wet tip of it, like the toe of a sock, into the funnel stock into an empty glass honey jar. I poured the syrup — by now no longer really boiling hot — into the filter, where it formed an amber pool containing many black particles. Then, ever so slowly, it began to drip into the honey jar, one beautiful drop at a time.

Nothing I did to try to speed the process worked, but by 7 o'clock there were 10 oz. of golden syrup in the jar, all the black particles were in the filter, and I sat down to supper happy, tired and deeply contented with my day.

March 20

This afternoon, as the frozen sleet melted off the grass and the weather warmed, I celebrated the first day of spring by starting, let's see, 57 seedlings — planting that number of seeds times either two or three, depending on whether it was new seed or some that had spent the past two years in the freezer.

In principle, I'd rather not coddle seedlings under lights; I'd prefer the simplicity and unfussiness of planting everything directly in the ground. In principle I would prefer to grow only open-pollinated varieties, too, and save the seed. In practice, I've always departed from both these preferences.

For one thing, tomatoes, eggplants, peppers, and brassicas take almost the entire growing season in my southeastern Pennsylvania garden to complete their life cycles if sown outdoors. This can work okay for fall broccoli and Brussels sprouts, but I want tomatoes in July, not September. For another thing, our soil contains a lot of soil-borne diseases; so we plant tomatoes with multiple disease resistance, the varieties with VFNT after their names in the seed catalogs.

These multiple-disease-resistant varieties are all hybrids, and hybrids don't breed true from seed. I can't save tomato seed over from year to year unless I'm willing to settle for whatever grows. We do commonly get numerous volunteers in the previous year's tomato beds, which — if not weeded out — mature and produce fruit, but size and degree of flavorfulness are always a surprise, unpredictable and usually — though not always — inferior. Sweet Chelsea, the toughest tomato variety I ever met, is particularly prone to sending up volunteers similar, but not identical, to itself.

The local nurseries sell seedlings of only a couple of the more popular varieties like

Better Boy, not these tough VFNT tomatoes; nor do they sell seedlings of the savoy kinds of cabbages that make good cole slaw, and cole slaw is why I'm growing cabbages in the first and last place. So there are some seeds I need to start every year.

Lettuce *can* be direct-seeded; but, in addition to soil-borne diseases fatal to members of the nightshade and cucurbit families, we also have a huge population of

Books about seed-starting always make it sound so hard and complicated. I just fill up all the pots, plastic and peat, saturate the planting mix with water, poke a few holes in with a pencil point, drop in seeds, and use the pencil point to close the holes. We're always warned not to cover seeds by more than twice their depth in soil — surely more of a general recommendation than a firm rule: how do you measure twice the depth of a tiny tomato seed in lumpy mix?

slugs that eat the young lettuces faster than they can grow. To get lettuce I have to set out husky adolescent transplants which grow faster than the slugs can eat them.

I would prefer not to buy any seed-starting supplies; I'd like to mix up my own seed-starting mix at the end of the season, and sterilize and save it to make soil blocks the following spring. But I'm starting out the Homestead Year flatfooted, so to speak, making do with what's on hand and patching in temporary solutions while I work on permanent ones. So I did buy some Jiffy peat pots and seed-starting mix — peat and vermiculite, my favorite stuff for the job, though it's the devil's own task to get it to absorb water. Then there's the 20-pound bag of potting soil left over from two years ago. The potting soil, which absorbs water just fine, is supposedly too heavy for seed-starting. The last time I ran out of seed-starting mix, I couldn't find more at the garden center and had to fall back on this darker, lumpier stuff full of perlite, which always reminds me of styrofoam; so this will be a chance to see whether cabbages actually do grow better in one than in the other.

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than twice their depth in soil — surely more of a general recommendation than a firm rule: how do you measure twice the depth of a tiny tomato seed in lumpy mix? I just press a little bit of mix on top with the pencil. The seedlings always seem to do fine.

When all the seeds were planted I bundled them up in or under used plastic bread bags and put them where they would get the bottom heat that hastens germination. The little green Burpee 12-pack and the white plastic pots in their black tray, in separate bags, went on top of the water heater in the basement. The five eggplants in peat pots, set in an aluminum cake tray, are also on the water heater. The cabbages, 20 peat pots arranged on an old metal tray on the floor of my study, in a spot where the bare wooden floor is warmed by the hot-air duct just beneath.

The variety choices that follow reflect years of trial and error, of discovering both what will grow well here, and what Ted and I both like to eat:

Cabbage: Salarite, a delicious type for slaw and much less space-greedy than the equally delicious Savoy King. Stokes, the only company I know of that offers Salarite in its catalog, now coats the seeds in pink fungicide. It's a lot of bother to dissolve off, but I do. Twenty plants.

Tomatoes: Hybrid Gurney Girl VFNT; Beefmaster VFNT; Viva Italia VFS. Eight, six, and four plants respectively.

Eggplant: Burpee Hybrid, a seed-order freebie, leftover seed saved in the freezer from 1990. Five plants in peat pots.

Sweet peppers: Jupiter. Said to be good. Six plants, filling half of the Burpee six-pack.

Hot peppers: Hungarian wax. I opened the packet (from Stokes), found the seed coated with the same pink fungicide as the cabbage seed, and threw the packet away. Lots of other sources for Hungarian wax peppers. After this year, apart from the Salarite order every two or three years, Stokes doesn't get any business from me until and unless they offer untreated seed again.

Lettuce: Green Ice. Eight plants in white plastic pots. Unfailingly successful in my garden. I'll start some Red Sails and Black-Seeded Simpson too, when I get some more supplies.

March 24

This morning five of the eight lettuce pots have seedlings, as well as one of the Gurney Girls. A problem of having put two different crops in the same "system" of

pots now reveals itself: the lettuce should come out into the light, the tomatoes should stay covered and the bottom heat should continue for them at least another day, till more of them come up. No time to settle this before leaving for a day in town, so I took the whole tray out of its bag and set it on the floor by the south-facing patio doors, to spend the day in the sun.

When I checked on the cabbages, seven of the ten planted in potting soil had sprouted, compared to only three of the 10 planted in Jiffy Mix. Moreover, three potting-soil pots had two sprouts. So much for potting soil being too heavy for seed-

starting, though the difference in *number* could be accounted for by a difference in the degree of bottom heat that got to each group of pots. These are ready to come out of the plastic for keeps. I put them next to the other tray by the patio doors. My basement arrangement of fluorescent lights isn't ready for sprouted seedlings yet, but setting it up will be tomorrow's number one priority.

March 25

A few years back I bought a shop light fixture, several four-foot fluorescent tubes, some light chain, and two hooks with

screw-in threads. I screwed the hooks into two rafters over part of the work table in the basement and hung the shop light from them by the chains. After waterproofing the table with some slit-open plastic trash bags, I lined up my motley assortment of seedling pots on the table and lowered the lights until the tubes hung a couple of inches above the plants. Then during the following eight weeks, as the plants grew, I raised the fixture up the chains, day by day and link by link, always keeping the light just above the crowd of seedlings.

It worked fine. Some articles tell you to use one warm-light tube and one cool blue tube, but I didn't do that (other authorities say it doesn't matter) and indeed it didn't seem to. Because this way of growing young plants relies on electricity, I like the old windowsill method better, but this method did seem to produce sturdier seedlings.

This morning I carried a bucket of warm soapy water and a sponge down to the basement, and washed the accumulated cellar dust off the black plastic still covering the table. I also washed the shop light, and the fluorescent desk lamp I use as a backup light, and plugged both of them in. Then, one by one, I carried down the trays of seedlings and tucked them in place. After unscrewing all the other light bulbs in the basement, so we can turn the shop light off and on by the upstairs switch, I went away and left the little green leaflet faces yearning upward toward the light.

April 7

Another sting, my second of the season! I was moving leaves from the site of the future potato patch, working with rake and hoe, aware that bees were zipping by, when bam! a bee hit my head and got tangled in my hair, buzzing frantically; I tried to bash it before it could sting but only managed to help it make contact. I guess I killed it, but when I went inside and looked, there was the little black stinger embedded in my scalp.

The hive is in the wrong place, that much is now pretty clear. In its former position under the trees back by the cemetery fence it never gave this sort of trouble; but I'd read that bees kept in the shade seem to be more aggressive, so during the cold weather Ted and Jim and I moved them into the sun. Now what? They can't be moved now, not more than a foot or so per day, or they won't be able to find their way home.

After getting stung I gave up leaf-mining, pending a solution to the problem. Instead I went and opened a furrow in the dug bed,

Seedlings, raised under fluorescent lights in the basement, come outdoors to harden off before being transplanted into the garden. Included are sweet peppers and tomatoes, marigolds, eggplants, hot peppers, and pennyroyal.



photo by Judith Moffett

which is safely out of the flyways, dumped in bucket after bucket of compost from the big garbage can, then closed the furrow and worked quickly up one side of the bed and down the other, spading the compost into the soil. Then I raked the whole bed into the shape of a very long meat loaf, smooth and round — flattened the top — and planted the onion sets on four-inch centers, pushing them down into the soil. Finished, the whole planted bed is dimpled with a pattern of little push-marks. All the

I opened the packet (from Stokes), found the seed coated with the same pink fungicide as the cabbage seed, and threw the packet away. Lots of other sources for Hungarian wax peppers. After this year, apart from the Salarite order every two or three years, Stokes doesn't get any business from me until and unless they offer untreated seed again.

while my head was burning in that cold bee-venom way, but again, it wasn't a bad sting. I will have to solve the problem though. It can be worked around. And a temporary solution needs to be found pretty soon, because it's getting to be time to plant the potatoes.

When I'd finished it was after four, the hive was in shadow, and the bees had calmed down. I moved the rest of the compacted leaves off one of the framed beds in the future potato patch so I could dig around the inside of the box, then levered it up with the shovel all the way around. It'll be easy to move when Ted's able to help.

April 8

I opened the bag of seed potatoes, thinking to let them start presprouting. Every potato had grown at least one long fleshy tentacle, and most had a lot of them; it was hard getting them out of the bag without breaking the sprouts off. I cut them very carefully into pieces and set the pieces in cardboard boxes to make calluses and keep sprouting.

Friday Ted thinks he'll have some time to help me with a (potentially) ingenious idea I have for bee-proofing the garden so I can get the potato patch ready to plant.

April 10

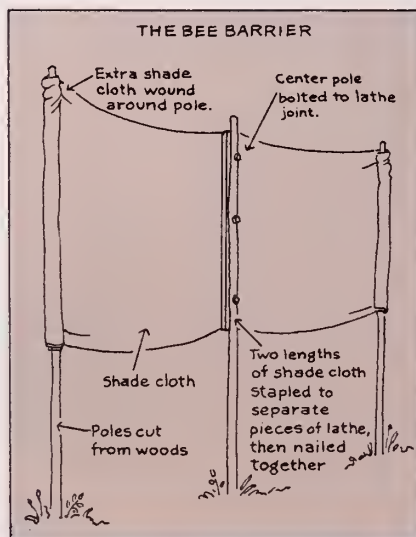
Ted and I spent the morning devising, and the early afternoon putting up, a device for making the bees fly higher over the

garden; and, except for a few nuts and bolts, and 20 feet of nylon cord, we did it all with stuff we already had around. We used two lengths of shade cloth five feet wide, used for the past two years to cover the pergola (which gets ferocious afternoon sun in summer), three eight-foot poles cut from the jungle along the cemetery fence and trimmed of branches, some wire, and the aforementioned nuts, bolts, and cord.

We needed a way to force the bees to change their flight path. They'd been zooming back and forth over the garden fence like bits of shrapnel, right at neck height; I wanted to be able to stand in the potato patch and have them clear my head by a good two feet. My idea: to create a barrier by attaching the shade cloth to the poles and raising it above the three-foot wire fence, securing the poles to the three equidistant metal fence stakes with wire.

Neither piece of shade cloth was long enough by itself; together they made a strip much *too* long for the purpose, but I didn't want to cut them. That problem we solved by fastening the two pieces together and rolling the outer ends around the end poles. The result resembles a long scroll of green netting cut in two, with the cut ends joined in the middle. The joint was made by stapling each cut end tight to a lathe and nailing the two lathes together. We then bored holes through both lathes and the center pole to receive the bolts.

We've ended up with something that looks like a very tall green volleyball net set up on three posts instead of two. Ted — ducking bees — held the center pole tight against the center fence stake while I, wearing my bee helmet and veil, twisted wire around both pole and stake and tightened the wire with pliers. Then we



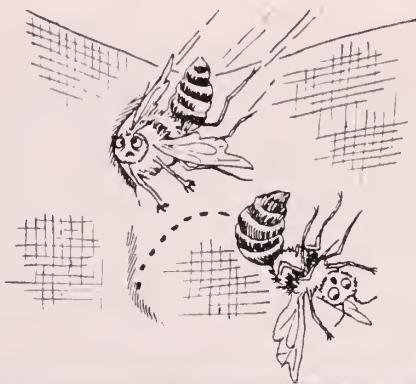
raised and wired the end poles. The netting drooped and flopped around in the wind, but for the moment it was up. Later I got the stepladder, and bunched and tied the scroll ends at the top with the nylon cord.

It was a brilliant, sunny day, the warmest yet this spring. We stood admiring our handiwork and watched the bees zip straight into the netting, bopping into it both coming and going from the hive. With the sun glinting on their wings we could see them very well. I'd hoped the dark green



photo by Judy Moffett

shade cloth would be visible to them, but they couldn't seem to see it. I suppose these are field bees that have been going and coming on this flight path for a while now, and simply couldn't believe that this large obstacle had sprung up suddenly to block the way. Now I'm thinking, if I can just tough it out for a couple of weeks, this whole generation of field bees will work itself to death, and the next generation will encounter the barrier on its first flight and learn to avoid it.



The day got cloudy, late in the afternoon, so the bees calmed down and I went out and spaded up Boxed Bed #1 (sans box), pulling out thistle runners and digging in four or five pailsful of compost, which isn't nearly enough but is all I thought I'd better put in — there's lots more garden that needs the four remaining cans of overwintered compost. A bee or two wandered over and poked around in the moist soil, but nobody crashed into me. The bed looked luscious when I'd raked it smooth.



The author spreads straw mulch over her potato beds, protected from the foraging bees in the green and white hive by a "bee barrier" that looks like a volleyball set-up. She was stung repeatedly before the barrier went up.

photo by Judith Moffett



Rows of seed potatoes wait to be covered by two feet of straw mulch — an experimental method of potato cultivation, which the author tried for the first time during the Homestead Year.

April 12

This afternoon, after a long dreary morning of taxes and benefits, I rushed gratefully outside to dig the second boxed bed in preparation for planting potatoes. The boards were just as rotted as in the other bed; I moved them one by one back to the jungle and set to work. It was obvious at once that I was up against a very different proposition here. Bed #2 has had everbearing strawberries in it for the past two years. Even without the problem of thistle invading the bed, the strawberries were not a success — pretty but flavorless. The Canada thistle made it easier to decide to dig the whole planting under, but the thickly tangled strawberry roots and two years of not being dug made for a dense, compacted soil, and I had to work hard to spade the whole thing up. But it got done, finally. I spread another four or five buckets of compost around and raked it into the surface soil enough to keep it from blowing

if things got windy. In a couple of days I'll turn it again.

April 14

Spring's finally here. This has been a great day, cool and sunny, wonderful for working outside. I mixed up a big batch of Square Foot Fertilizer, amended to double the potassium content: four parts compost, six parts wood ashes, two parts bone meal, and one part blood meal. Using that much wood ashes will raise the pH a little, but it's at 5 now and can afford a slight boost upward. I had everything but the blood meal on hand, and decided that between the last of the Vermont 100, a couple of free sample packets of Gardens Alive! products, and the high nitrogen component of the current batch of compost, I could skip the blood meal. I redug Ex-Boxed Bed #2 — much easier this time — pulling out lots more thistle runners.

I dumped "some" of the fertilizer mixture

where the potatoes would be planted and raked it in. Then I spent a few minutes deciding where to put five varieties of potatoes. After poring over the Ronniger's catalog last January, I settled on: Rote Erstling, Desiree, Ontario, Cherokee and Krantz.

Judy Moffett is the author of eight published books including poetry, Swedish translations and science fiction. Moffett is adjunct professor of English at the University of Pennsylvania and staff reviewer for the University's *Pennsylvania Gazette*. Current projects include a TV script *Star Trek: The Next Generation* and a nonfiction book: *Webfooted Friends and Others: Homesteading in the Philadelphia Suburbs*, from which this article has been adapted. Moffett and her husband Ted live in Rose Valley, Pa.

Read Part II in the January issue of *Green Scene* when a Blessed Event will be chronicled.

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The Embrace of Old Trees

 by Ken Radeloff

Be honest. Sometime in your life — was it a time when things weren't going well for you; when your inner resources were stretched thin, when the balance of life's joys and sorrows tilted dangerously toward the sorrow-side; when you felt far from friends and even your pets couldn't help; have you walked up to a very large tree. Perhaps it was a tree you'd known for a long time, an oak maybe, a giant poplar or a great furrowed ash.

You approached the tree, laid your palm against the shiny, shaggy, or corky bark. You looked around quickly to make sure no one was watching, then stretched your arms around the mighty trunk, resting your cheek against the rough, dense mass of living wood. You remained that way for only a few seconds, or perhaps you continued to cling for a little while, suspended in a benign state of trust and receptive gratitude. As your weary heart softened and opened, you could feel a silent river of strength and beauty flowing into your own tender being. Strange. Mysterious. Crazy. Wonderful.

Be honest.

You've done this. If not, why not.

Ken Radeloff is proprietor of No Bull Landscaping and has occasionally hugged a tree.

Forgotten Fruit

 by Kim Wilson

photos by Rob Cardillo / Organic Gardening

They're rarer than Delicious, more precious than Barletts — discover the pleasures of grafting (and tasting!) your own antique apples and pears.


Do you consistently say “No thanks” to not-so-delicious Delicious apples and pass by the hard, gritty Bartlett pears in the supermarket?

Before you give up on fresh fruit this winter, try a divinely cider-flavored York Imperial apple, or a tart, aromatic Esopus Spitzenburg apple — or how about a spicy, silky-smooth Collette pear? These rare, old-fashioned fruits and others like them (many available for sampling from a company called Applesource) have been given a thumbs-down by most commercial orchardists, but a bite or two will tell you that their flavors are so sublime, you'll wonder why more people aren't shouting their names from the housetops.

It's understandable that some of these varieties, grown on family farms for generations, never made it to commercial status. Red Summer Rambo, for example, is a huge apple, the size of a grapefruit, and delightfully tart. The fruits fall off the tree a few at a time as they ripen, a definite drawback to large-scale harvesting. But Red Summer Rambos make the best apple pie you've ever tasted.

Summertime is another one that ripens in shifts, making harvesting a little more tedious. It's about the size of a McIntosh, but the skin has vertical striping in shades of red, yellow and green and the flesh has a faintly pinkish cast. What a pleasant surprise to find that Summertime applesauce is a luscious shade of rose! And the batch I made was so tasty, my family and I ate applesauce almost every night until it was gone.

Before I was introduced first-hand to some of these rare varieties I, too, was a Delicious apple snubber. When the Wine-saps and really fresh McIntoshes disappeared from the store in late fall, I'd



Two of the 13 pear varieties Glenn Reeder grows are Clapp's Favorite (left), ideal for fresh eating and canning, and Seckel (right), a sweet buttery variety. He grafted both types onto the same rootstock.

stock up on grapefruits, bananas and an occasional kiwi to get me through until my June strawberries came in. Then I met Glenn Reeder, a man who is devoted to collecting just about any unusual apple or pear variety he can get his hands on. When I first visited his hillside homestead in New Tripoli, Pennsylvania, it didn't take long before his enthusiasm for finding and preserving forgotten fruits began to rub off.

Glenn, in his early 40s, and his wife, Linda, bought the 18-acre south-facing property about 19 years ago. After clearing the land and building a passive solar home, Glenn began his collection, which now spreads out in rows over about 1/2 acre. A vegetable garden as well as other fruits and a selection of nuts cover perhaps another 1/2 acre.

A family tradition

Glenn's first tree was a cutting from a chance pear seedling that sprouted up in his parents' canning waste. The fruit is so buttery and sweet, he has dubbed it "Reeder's Super Seckel." Glenn, who grew up in Pennsylvania's Lehigh Valley next to his grandparents' small farm, vividly remembers eating very special-tasting apples and pears from his family's trees — trees found nowhere else, as it turns out. He also has memories of selling homemade cider by the roadside as a child, and of watching his grandfather successfully graft nut trees, a difficult skill that Glenn so far has been unable to duplicate.

Grafting apples and pears is much easier, Glenn says, and with more than 100 varieties of the two fruits, he has obviously mastered the technique. But, whereas the standard practice is to graft one variety to one rootstock, Glenn uses what he calls "mother trees" — rootstocks that hold five, six or, in one case, over 32 varieties, each labelled with a metal tag. And, in the true spirit of gardening, he also can't resist the urge to experiment. The rootstock with 32 varieties is a pear — yet all the grafted cuttings are apples. The tree, which was grafted about eight years ago, has been producing fruit for five years. "The books tell you not to put pears and apples together," Glenn says, "but I tried it and it works." He adds that the apple wood tends to eventually outgrow the pear wood, so he doesn't recommend the combination as a long-term graft. When that happens, he'll simply re-graft the apples onto their own rootstocks.

Glenn didn't originally plan to collect so many varieties, but once they were offered

to him, he couldn't very well turn them down. Having more cuttings than rootstocks on hand made the idea of using mother plants a necessity. (He uses a variety of dwarf, semi-dwarf and interstem rootstocks, but prefers standard-size rootstocks because of their vigor and longevity.) "I really started out doing this wrong," he admits. "At the time, I didn't think I wanted to plant that many rootstocks." But he figures that the mother plants will keep the rare varieties going — kind of like a living germplasm bank. He can then take cuttings from these branches and graft them onto individual stocks when he has the time and has prepared the space.

After Glenn propagated "Reeder's Super Seckel," he went back to his family's homestead and returned with two apples from his childhood, known only as "Red Tart From Home" and "Not-Smokehouse From Home" (his grandfather thought it was a Smokehouse, but Glenn suspects it's a cross between Smokehouse and Early Harvest). Glenn soon began to realize that there are probably thousands of forgotten or even undiscovered varieties of apples and pears just waiting to be saved.

Starting a collection

Seeing his collection of dozens and dozens of varieties, one has to wonder where he finds all these gems. Is he just incredibly lucky? Although he has stumbled upon the occasional apple or pear along a back road, in the yard of an abandoned farmstead or deep in the woods on a hunting excursion, Glenn says that meeting the right people, three in particular, has been the key to developing his rare fruit collection.

Ken Friedman, who has about 75 apple varieties trained espalier-style on a 50-by-60-foot plot, was the first to donate cuttings to Glenn's collection. Glenn contacted him through Ken's ad in a local conservancy publication requesting scionwood of unusual apple varieties. Although Glenn didn't have many kinds to offer, he ended up with 20 cuttings from Ken along with lots of encouragement and welcome advice. Glenn was hooked.

Soon afterward, he met Daniel Brubaker, a Mennonite farmer from Lancaster County who, as a young man, began working on an already long-established orchard early in this century. He later purchased the orchard and continued to work it until recently. His collection contains a fascinating array of rare and one-of-a-kind varieties. Some have recently gained recognition through

continued

Collecting and Storing Scionwood

Once you've spotted a tree you want to propagate, make arrangements with the owner to take cuttings sometime between late January through mid-March, or until buds begin to swell. Using a sharp knife or pruners, cut lengths of one-year-old wood (the most recent growth) at least 6" long or as long as you can conveniently store. Segregate varieties with rubber bands and label each group with waterproof ink on masking tape. Wrap each bundle of scions in damp newspaper or paper towels and place in a plastic bag — Glenn uses bread bags. Store in a refrigerator or cool, damp root cellar. Every couple of weeks, check the scionwood to make sure it isn't drying out or getting moldy from too much moisture. The cuttings will store for as long as four months, Glenn says, but are best used within two to three months.

Mail Order Sources of Rare Apple Trees

Applesource: a mail-order source of over 80 rare apples (the fruit itself) that you can sample in any combination — a great way to help decide which varieties to grow. For a catalog, write: Applesource, Tom Vorbeck, Rt. 1, Chapin, IL 62628.

Miller Nurseries
5060 West Lake Rd.
Cananhaigua, NY 14424

Sonoma Antique Apple Nursery
4395 Westside Rd.
Healdsburg, CA 95448

Southmeadow Fruit Gardens
Box SM
Lakeside, MI 49116

NAFEX (North American Fruit Explorers): devoted to finding, researching, propagating and breeding rare and unusual fruits and nuts. Membership includes four issues of Pomona, an 80-page compendium of articles on home fruit culture, and the 142-page "Handbook for Fruit Explorers." To join, send \$11 to NAFEX, Jill Vorbeck, Rt. 1, Box 94, Chapin, IL 62628.

Miller Nurseries and other mail order firms — no coincidence, since it was Brubaker who provided the cuttings for them. Glenn obtained 20 varieties from his orchard, some of which, like Sour Watermelon, are extremely rare. Now that Brubaker is in a nursing home, Glenn worries about what will happen to the orchard and the varieties he wasn't able to propagate.

Other contributors to Glenn's fruit collection include a fellow apple collector he met at work and another coworker, Delbert Hank, whose family's farm went up for sale a few years ago. Delbert had heard that Glenn was interested in old fruit varieties and approached him about propagating some of the apple trees that grew on the family farm. As a boy, Delbert would help his father harvest grain with an old-fashioned combine, sitting on the back and filling up the feed bags as the grain was taken off — a hot, dirty job, he recalls. "About the time they were taking the grain off," says Glenn, "the apples were ripe and he remembers yelling to his father to stop the combine. He'd run over to a tree that was along the fence line, and would grab a bunch of these apples so he'd have some-



To save space, Reeder often grafts more than one variety onto a single rootstock, which he calls a "mother tree." A kind of living germplasm bank, this plant contains 32 rare apple varieties and has been producing fruit for seven years.

thing to wet his mouth while he was working."

According to Glenn, an apple seed (which has a different genetic makeup from the apple that produced it) has a one in 10,000 chance of developing into a tree with commercial potential. (The odds are slightly better for an ordinary tasty apple.) Delbert said that the "Grain Harvest" tree, which probably sprouted from an apple core chucked by a farmworker long ago, was the most worthwhile of all the apples on the farm. Glenn was able to propagate this tree

along with about two dozen others, and gave Delbert a "Grain Harvest" tree of his own.

Collection tips

Once people find you're interested in rare apples and pears, says Glenn, there seems to be no shortage of sources. To avoid getting completely overwhelmed, he has been forced to limit his collection to varieties of the two fruits that are pest and disease resistant and that store well. Among apples, good storage goes hand in hand

Glenn Reeder's Easy Bench Graft Technique

Tools you'll need:

A sharp, clean knife

1/8"-3/16"-wide rubber bands, 6-8" long

Grafting wax

Clean metal container

Alcohol stove or Sterno

(Note: avoid kerosene, fuel oil or Coleman fuel, which can leave a contaminating residue on hands, equipment and scions. And if you're doing only a few grafts, you can melt wax in a saucepan on a kitchen stove.)

1/2"-3/4"-wide paintbrush

Metal tags or other labels

18-20 gauge wire for attaching metal labels

Step-by-step Grafting:

The ideal time to graft in Pennsylvania is from mid-March to the end of April.



Wash hands thoroughly and make sure all tools are clean.

Select a rootstock, either a branch of an established tree or a one-year-old "whip." Prune off excess foliage to help force energy into graft.

Select a scion close to the same diameter as the rootstock. Make a clean cut on stock where you want to make the graft.

Lay scion horizontally on rootstock cut as shown and, where diameters match, nick with knife or hold your fingernail there to mark. Trim scion so mark is 3/4" to 1" from end. Then trim upper end of scion so that two to four buds remain, leaving a generous length of wood above uppermost bud.



Starting 1" to 1 1/4" from the lower end, or butt, of the scion, make a long, angled cut ending at the center of the butt. Repeat on the opposite side so you end up with a wedge-shaped end.

photos by Rob Cardillo / Organic Gardening

Glenn Reeder makes dozens of grafts each year, many of them on small rootstocks like these. Here he applies grafting wax with a brush. He wraps the young trunks in aluminum foil to discourage rabbits from chewing on the bark



photo by Rob Cardillo / Organic Gardening

with hard, tart fruit — which also happens to be Glenn's favorite type of apple.

Despite his self-imposed limits, Glenn also says that he wouldn't discard an apple variety just because he personally doesn't like the flavor, as taste can be very subjective. More important, the genetic material may have some breeding value, he points out. He has one called Blue Pearmain that is so waxy, it feels greasy to the touch. It stores exceptionally well because of this coating. "It has this — I wouldn't call it blue, but it has this funny cast to it," he says. "It does not look attractive at all. And it has a strange taste. I wouldn't say I like it. But if that waxy characteristic could be bred into another apple, it may help storage life on another fruit."

Glenn stresses the importance of labelling and record-keeping to keep track of what you've got in your collection. He uses aluminum tags that can be impressed with a ball-point pen. He tries to wire them onto the grafted cuttings tightly enough that they won't get blown off (it happens anyway sometimes), but not so tightly that they will girdle the twig. As a backup, he recommends having a detailed drawing of the

plantings, showing the location of each variety. Other information to include: date of grafting/planting, source of cuttings, date of first bearing and ripening, and notes on pest damage and controls. And, of course, descriptions of flavors and appearances, especially if some are unknown varieties and need identification.

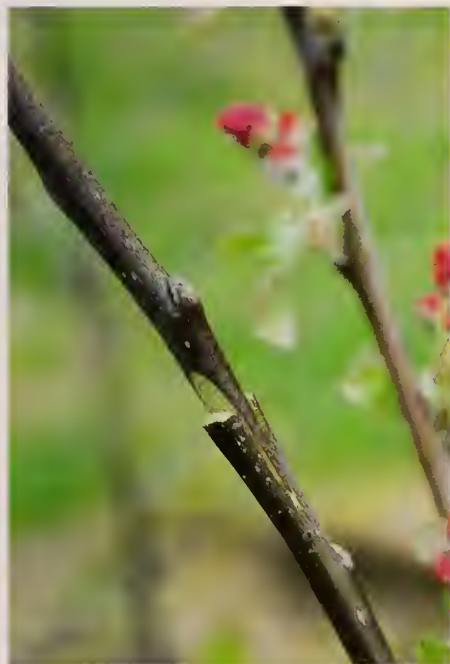
It's encouraging to know that a few people out there are carrying on the tradition of preserving and passing along the best chance seedlings of apples, pears and other edible plants. Ultimately, it is on the amateur growers and breeders that commercial fruit growing depends: the French who brought the first European fruit trees to North America circa 1540; the British who established their pomological tastes here; the anonymous farmers and families of all backgrounds who shared favorite trees with neighbors, friends and relatives.

Glenn Reeder is an important part of this tradition, as is every individual who saves even one specimen of rare genetic material. "My family's been in this country for 360 years," says Glenn, "and I just wonder, maybe one of my ancestors brought over a variety that I've got growing here." A

hundred years from now, as his great-great-granddaughter munches on a tasty pear from her orchard, perhaps she will wonder if one of her ancestors ever tasted the same pear — the one her father called "Reeder's Super Seckel."



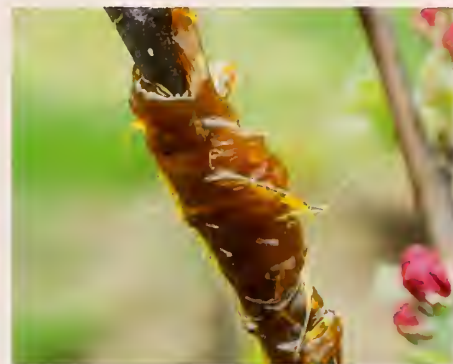
Kim Wilson grows an eclectic selection of vegetables, fruits and flowers on her one acre in Emmaus, Pa., including several antique apple and pear varieties. A former editor of *Organic Gardening*, she has a B.S. degree in Plant Science from the University of New Hampshire and a Certificate in Ornamentals from Longwood Gardens.



Squeezing the end of the rootstock to avoid splitting, make a slit in the stock about 1" deep. Insert cut end of scion into slit, far enough that cambiums (inner bark) of stock and scion meet. If sizes don't match exactly (which they should for best results), adjust scion so that cambiums touch on one side.



Cut rubber band and wrap over cut surfaces, starting at the bottom, wrapping to the top of the graft, and back down again. To keep it from unravelling, tuck the ends under or tie ends in a double knot.



Heat grafting wax just until it's melted, but not so hot that it burns your fingers.

Apply a generous amount of wax with a brush, covering rubber band completely and dabbing a bit on the cut tip of the scion.

Label the graft with variety (or a number corresponding to your records) and date. You can use a temporary label, but put on a permanent one as soon as you are sure that the graft has taken, which will be within two to four months.

Two or three weeks after the scion leafs out, remove the rubber band, carefully. Don't leave it on beyond late summer or it could girdle the new graft. If the scion has vigorous new growth, you can pinch it back to prevent the graft from breaking. By fall, the graft union will be fully healed.

Books that Change the Way We



16

I've been called a fanatical gardener, but I have another addiction as well: books. Rarely a week goes by that I don't check the gardening section of my favorite bookstore for new arrivals. No greenhouse for me — ever; these winter months are for *reading* and *dreaming*. I have shelves of gardening books waiting to be read and many favorites I have reread several times.

I've developed strong opinions about certain plants and certain books and suspect this is the case with most gardeners. Since I've rarely found a gardener who is not an avid reader, I thought it would be interesting to learn about other gardeners' favorite books — and add more books to my piles of those waiting to be read. I wrote to a group of gardeners, garden writers, professional horticulturists and educators and asked them the question "Which three books have you read that have changed the way you garden or look at gardens?"

Most of the respondents expressed frustration about selecting only three books. Linda Yang, garden writer and book reviewer for *The New York Times*, has a vast personal library and found the question impossible to answer. She said after pondering it for several days: "I can honestly

say there are not three books that influenced me or changed the way I garden or look at gardens but more on the order of three hundred, and more likely even three thousand."

Ed Lindemann, Pennsylvania Horticul-

"The Wild Gardener in the Wild Landscape: The Art of Naturalistic Landscaping by Warren G. Kenfield opened my eyes to the intelligent use of herbicides and machinery to control growth of desirable and undesirable plants."

Richard W. Lighty

tural Society horticulturist and flower show designer, notes that while garden and basic design books may be universal, when it comes to good plant and gardening information he tries, if possible, to select books by local authors who have actually gardened in the area. His "old, all-time favorite" reference classic is *America's Garden Book* by Louise and James Bush-Brown. His other selections were *Gardens, Plants and Man* by Carlton B. Lees," a

wonderful collection of photos, drawings, quotes and text giving the history and relationship of people and plants, and *How To Plan Your Own Home Landscape* by Nelva M. Weber. The best practical text on how to organize and create outdoor spaces."

Ernesta Ballard also put *America's Garden Book* on the top of her list as well as *Taylor's Encyclopedia of Gardening* and *Trees for American Gardens* by Donald Wyman. "No book has changed the way I garden or look at gardens. Experience in hands-on gardening has been my teacher for 40 years, but these books 'turned me on' or taught me in the beginning."

Kath Duckett also emphasized the importance of reading American writers. She often works with clients who have just returned from England and want to go wild with their own gardens, planting everything they've seen and "usually it just doesn't work. We're just different." She picked titles that offer good advice about gardening in our part of the world. Frederick McGourty, author of *The Perennial Gardener* is her gardening mentor. "His singular sense of humor puts gardening and life in perspective. As a plantsman he's the best." Finding *Designs for American Gardens* by Alice Recknagel Ireys confirmed every-

Garden

by Richard L. Bitner



Photos by Richard L. Bitner

favorite — growing plants in pots both indoors and out. She added that the first paragraph of Rutherford Platt's 1943 books *This Green World* still gives her 'goose-bumps' because of the poetic writing. *Garden Making*, a book by Elsa Rehman written in 1926 was her third choice. "I will always be grateful for the help book dealer Elisabeth Woodburn gave me during my years in the Pennsylvania Horticultural Society Library. One of the best pieces of advice Betty offered was that I get to know the American garden books written in the 1920s and 1930s. The Rehman book taught me to see what I was looking at and looking for in the garden. Rehman approached garden making as a fine art and was an early advocate of adapting the design to the site rather than vice-versa. Her ideas are thoughtfully set forth and the book holds up as well today as it did nearly 70 years ago when it was published. Reading Rehman and other books from that era can be a rather humbling experience; Rehman and her contemporaries took the time to understand the 'genius of the place' and were more environmentally aware in many ways than we are today."

I was interested in learning the choices of another former Pennsylvania Horticultural Society librarian, garden writer and photographer Mary Lou Wolfe. On the top of her list was *The Secret Garden* by Frances

Hodgson Burnett. "A lot of my gardening has been with my children or grandchildren and this book captures what spring means to the kid in all of us. It also makes a great case for enclosed spaces, walls and privacy in the garden." In *100 Great Garden Plants*, William H. Frederick, Jr. "makes the case for being picky with our choices and illustrates some smashing combinations. I also like his knowledge of and experience in northeastern gardening."

Wolfe also recommends May Watts' *Reading the Landscape of America* for an understanding of ecology and plant geography. Mary Lou found making choices difficult and would have liked to include Allen Lacy's books for fun and perspective in gardening as well as favorite reference books. "I'd be lost without my library. It's the only thing properly unpacked and arranged in our new house."

Allen Lacy is one of my favorite writers on horticultural subjects also. He has written numerous books, many columns for *The New York Times* and the *Wall Street Journal* and now publishes his own quarterly newsletter on gardening *homeground*. None of his choices are recent publications. He says that *Gardens in Winter* and every book by Elizabeth Lawrence reveals her as "our best American garden writer." He added that Katherine S. White's essays published in *The New Yorker* in the 1950s and 1960s and collected in *Onward and Upward in the Garden* showed that garden writing could be a lively critical art. He recommended reading *Old Time Gardens* by Alice Morse Earle (1901) to identify with the long tradition of gardening in America.

The oldest book mentioned was a selection by Elizabeth B. Farley: *Travels Through North and South Carolina, Georgia, East and West Florida (along with Botanical and Zoological Drawings, 1756-1788)* by William Bartram. "Bartram's deep understanding of nature along with his romantic and poetic style of writing have influenced how I look at and feel about nature and gardening. For inspiration and for respite from garden chores I dip into his writings and look at his drawings."

Farley also listed *100 Great Garden Plants* by William H. Frederick, Jr. "In this book a plantsperson's knowledge is combined with an artist's eye to stimulate the gardener down new and exciting paths." Of Eleanor Perenyi's book of essays *Green Thoughts — A Writer in the Garden* she wrote, "This volume delights and informs with practical advice, strong opinions and a sense of humor (we gardeners sometimes take ourselves too seriously). What a shame she has not written another book."

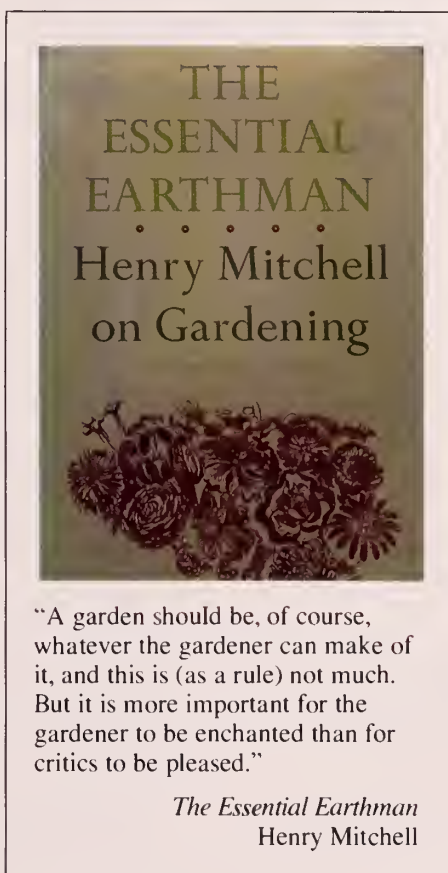
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thing she tries to do, Duckett told me. And of the new book *Charles Cresson on the American Flower Garden* she added: "It may be written for the novice, but then why am I learning so much? Like Fred McGourty, Charles gives great gardening advice, and I love his plant combinations."

When preparing for her lectures on gardening subjects, Margaret P. Bowditch turns to many reference books for information but she gets that and a philosophical approach as well as wisdom and humor from *The Essential Earthman* by Henry Mitchell, *The Opinionated Gardener* by Geoffrey Charlesworth and Eleanor Perenyi's *Green Thoughts — A Writer In The Garden*. "I like enlightenment laced with entertainment and I learn as much from these writers' funny confessions of occasional failures as I do from reading other books on gardening successes."

* * *

Julie Morris, horticulturist at Blithewold Mansion and Gardens for the past 10 years, and formerly Pennsylvania Horticultural Society's librarian, writes that a book she first read 30 years ago, Ernesta D. Ballards' *Garden In Your House* opened the door on a facet of gardening that remains her



"A garden should be, of course, whatever the gardener can make of it, and this is (as a rule) not much. But it is more important for the gardener to be enchanted than for critics to be pleased."

The Essential Earthman
Henry Mitchell

People Who Answered the Book Survey

Ernesta Ballard — Executive Director, Pennsylvania Horticultural Society, 1963-1972; president, PHS 1973-1980; author *Garden in Your House**

Margaret P. Bowditch — Horticultural lecturer, Temple University; photographer; gardener

Allen Bush — Plantsman; owner Hollbrook Farm & Nursery, Fletcher, NC

Pat Christopher — Instructor in Continuing Education and Professional Gardener Training Program, Longwood Gardens

Rick Darke — Curator of Plants, Longwood Gardens; photographer; lecturer

Kath Duckett — Garden designer; lecturer; owner of Perennial Designs, Doylestown, PA

Elizabeth Farley — Plantswoman; lecturer; former assistant director and teacher (ret. 6/90), Barnes Foundation

William H. Frederick, Jr. — Principal in landscape architecture firm Private Gardens, Hockessin, DE; author of *The Exuberant Garden and the Controlling Hand**

Pamela Harper — Horticultural photographer and editor; author of *Designing with Perennials*, Macmillan, NY, 1991*

Allen Lacy — Garden writer and editor, author of several books including *The Garden in Autumn*, Atlantic Monthly Press, NY, 1990*, *The Gardener's Eye*, Atlantic Monthly Press, NY, 1992*, and *homeground*, a garden quarterly

Richard W. Lighty, Ph.D. — Director, Mt. Cuba Center for Study of Piedmont Flora, Greenville, DE

Ed Lindemann — Senior horticulturist, Philadelphia Flower Show designer, Pennsylvania Horticultural Society

Ann Lovejoy — Garden writer and editor; frequent contributor to *Horticulture* magazine; author of *The American Mixed Border*, Macmillan, NY, 1993*

Frederick McGourty — Horticultural lecturer, designer and writer; former editor of Brooklyn Botanic Garden handbook series; author of *The Perennial Gardener**

Paul W. Meyer, Ph.D. — Director, The Morris Arboretum of the University of Pennsylvania

Henry Mitchell — Garden writer; *Washington Post* columnist; author of *The Essential Earthman** and *One Man's Garden**

Julie Morris — Horticulturist, Blithewold Mansion & Gardens, Bristol, RI; former librarian, PHS

Jane Pepper — President, Pennsylvania Horticultural Society; Flower Show manager; garden writer, *Philadelphia Inquirer*

Michael Pollan — Executive editor, *Harper's Magazine*



photos by Richard L. Bitter

"She led him round the laurel path and to the walk where the ivy grew so thickly. Dickon followed her with a queer, almost pitying, look on his face. He felt as if he were being led to look at some strange bird's nest and must move softly. . . . 'It's this,' she said. 'It's a secret garden, and I'm the only one in the world who wants it to be alive.' "

The Secret Garden
Frances Hodgson Burnett

Rob Proctor — Artist; photographer; garden writer; author of *Perennials*, Harper & Rowe, NY, 1990*, *Annals*, Harper Collins, NY, 1991*, and *Country Flowers*, Harper Collins, NY, 1991

J. C. Raulston, Ph.D. — Professor of Horticultural Science; Director of the Arboretum, North Carolina State Univ.; plantsman; lecturer; plant explorer, author

Joanna Reed — Gardener, writer, her garden Longview Farm featured in national and international publications

Claire Sawyers — Director, Scott Arboretum, Swarthmore College; horticultural writer and lecturer

R. William Thomas — Education Division Manager, Longwood Gardens; President, American Conifer Society; editor of *Trees and Shrubs*, Hearst Books, NY, 1992*

Mary Lou Wolfe — Garden photographer and writer, former PHS librarian.

Christopher Woods — Executive Director, Chanticleer Foundation, a public garden in Wayne, PA; author of *The Encyclopedia of Perennials*, Facts on File, NY, 1992*

Linda Yang — Writes about gardening in the *New York Times*; author of *The City Gardener's Handbook: From Balcony to Backyard*, Random House, NY, 1990*

L. Wilbur Zimmerman — Photographer/writer; orchid grower; panelist judge, Flower Show; certified judge of the American Orchid Society

*Books available to members through the Pennsylvania Horticultural Society Library

Green Thoughts is a favorite of Michael Pollan's as well. "This book showed me for the first time that there was more in the garden than meets the eye — politics, social status, environmental issues, etc." His other selections were *The American Gardener*, an anthology edited by Allen Laey, "my introduction to the history of the American garden and the lawn," and *Changes in the Land* by William Cronon. "Not a garden book, strictly speaking, but a book that opens your eyes to the sense in which the entire New England landscape is a kind of garden — the product of a give and take between people and nature."

Joanna Reed clumped two books *Vita Sackville-West's Garden Book* and *The Well Tempered Garden* by Christopher Lloyd, into one choice because "they had the same appeal and were both important in my outlook. Plants developed personalities through their words — delicious reading — but advice was practical, simple, direct and useful." She liked *The Englishwoman's Garden* by Avidle Lees-Milne and Rosemary Verey because of the humorous and valiant way these women coped with the frustrations as well as joys of their gardens. Joanna was also inspired by Beth Chatto's *The Dry Garden*. "Her methods of adapting her plantings to harsh realities of soil and climate and physical expenditure of energy bucked me up into holding onto my dreams."

Joanna reports that she finds the writing of Penelope Hobhouse, Rosemary Verey and Pamela Harper enriching and is astounded that these three women, and many other gardeners as well, generously distill and share their knowledge and experience with the gardening world at what must be a sacrifice to them personally in the loss of their own precious gardening time.

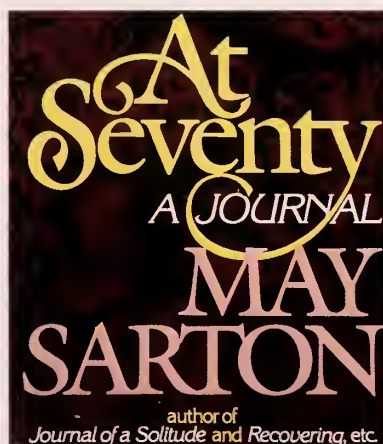
L. Wilbur Zimmerman, orchid grower and photographer, wrote that *The Story of Gardening* by Richardson Wright, 1934, was his earliest introduction to the richness that horticulture can contribute to one's life. *The Woodlands Orchids* by Frederick Boyle published in 1901 was the story of a major orchid collection in England and led Wilbur and his wife to undertake their own collecting trips around the world. "Books were and are such an indispensable part of our horticultural experience, but with shelves of gardening books, *America's Garden Book* by the Bush-Browns is the one we turned to most often. It is lucid, well organized and exactly on target for suitable plants for the Delaware Valley. It was the indicator that then led to the many books in specialized areas."

"I found Andy Goldsworthy: A Collaboration with Nature at a dinner party, and I couldn't put it down."

Claire Sawyers

* * *

"To allow space for new gardening books that ease into my life courtesy of writing for the *Philadelphia Inquirer*, each year I recycle some of my books into the PHS booksale, so many of those that might have influenced my earlier gardening days are now on someone else's shelves," reported Jane Pepper, PHS president. "There's



"So what is the inward order that makes it possible to shut out the chaos around me as I sit here? Perhaps a strong sense of what my priorities are — first friends, then work, then the garden. If I died suddenly, how bitterly I should regret work undone, friends unanswered. As for the garden, that is my secret extravagance and one has to have one! I learned when my mother died that a garden dies quickly without a loving gardener to keep it alive. . . . No one but me really *sees* this garden, suffers when there is drought, rejoices when a rose I had thought dead suddenly flowers or the tree peony, which looked quite "gone," shows a spray of new leaves and a sudden renaissance. The garden is where my madness lies, and that is a more useful madness than drunkenness or a tantrum."

At Seventy: A Journal
May Sarton

one I've hung on to however — *The Green Thumb Book of Fruit and Vegetable Gardening* by George Abraham (1971). This reflects our love of growing vegetables and it's covered with notes from those early days."

Among the garden writers that have provided my favorite reading, in addition to Allen Laey, are Henry Mitchell, Fred McGourty, Ann Lovejoy, William H. Frederiek, Jr., and Rob Proctor. Naturally, I was curious to learn their choices.

Henry Mitchell, columnist for the *Washington Post* and author of *The Essential Earthman* and *One Man's Garden* claimed that to his mind the best book for an overview of what gardening is about is *Wood and Garden* by Gertrude Jekyll. Of *The English Flower Garden* by William Robinson he wrote: "A new world of possibilities. The earlier editions are better than later ones. It's still the best exposition of the philosophy that *plants* are the thing, and richness of variety is the secret. None of this ivy, stone and periwinkle foolishness." His third choice was *Aristocrats of the Garden* by E. H. Wilson. "My first comprehension that even among such marvelous genera as *Viburnum* and *Rosa* some are more wonderful than others."

Ann Lovejoy believes that *Vita Sackville-West's Garden Book* deserves pride of place, "for her book led me past practical gardening to planting ornamental borders as an art form. Her compelling descriptions of garden combinations taught me the power of composition with plants. She understood the pleasures of process. She knew, too, both the greediness that needs lots of flowers right now and the slower joy of waiting for fruition. Margery Fish is the gardener's gardener, earthy, direct and entirely focused on plants. Her books are so dense with practical and wide-ranging information that every reading seems fresh and full of discovery. Though all her books have influenced me enormously, *A Flower For Every Day* informed my desire to make a garden that would remain alive and usable all year round." She reports that her third choice, *A Southern Garden* by Elizabeth Lawrence brought her to explore regional gardening and taught her how to make an ecologically appropriate garden as well as a personal one.

Vita Sackville-West was included among William H. Frederiek, Jr.'s choices as well. "*Vita's Other World* by Jane Brown captures better than any book I know the intimate and pleasurable relationship between gardeners and their gardens. One gets the same contagious enthusiasm in Harold Bruce's *The Gardens of Winterthur*."

continued

Another choice was Peter Shephard: *Modern Gardens, Master Works of International Garden Architecture* (1954). Defending his choice of *The Tropical Gardens of Burle Marx* by P.M. Bardi, Frederick notes, "This was the first publication of photographs of gardens by the 20th century's most original and artistically significant garden designer, Roberto Burle Marx."

Frederick McGourty wrote "I can't think of any book, much less three, that has changed the way I garden or look at gardens. A certain few human beings have had a more profound effect on me. One was George Avery, who was director of the Brooklyn Botanical Garden for 25 years. He had both vision and common sense, which isn't all that common. I do reread fully *The Gardener's Year* by Karel Capek from time to time. Capek's gentle humor

and understated wisdom touch the heart of gardening more closely than any written work I have come upon, but it is hardly a gardening book in the current fashion. This is no Ektachrome tome for the coffee table, just good reading for the ages or even to while away a flight to Cleveland. I also return to Hal Borland's natural-history books, especially *Beyond Your Doorstep: A Handbook to the Country*. Again, this is not a gardening book, but it sets a frame for the larger garden, without which our little borders have shallow meaning. His prose is clear and crisp as a frosty November night. Indeed, it is timeless, because it speaks of age-old truths without pomposity or ecological correctness."

Of *Making Things Grow* and *To Everything There Is A Season* by Thalassa Cruso, Rob Proctor relates, "I have always felt a great affection for these books and for

Cruso. Through her writing I began to see the connection between living and gardening — inseparable. Cycles and rhythms, triumphs and failures — these books still echo in my head 15 years after I first read them." And about *The Essential Earthman* by Henry Mitchell: "This book changed my life. It proved that garden writing can be glorious and funny and moving." His third title was *Vita Sackville-West's Garden Book*. "I like her writing — passionate, opinionated, and personal. I learned it's the making of the garden, not the end result, that is important. I've not read her poetry, but when she writes about plants, her words really sing."

Pamela Harper wrote "I've been gardening for about 40 years and have read thousands of gardening books . . . but no one book has made any major change in my approach to gardening. There'd be

Books: The Best and Brightest

The 69 books listed here affected the way some of the best gardeners we know work and perceive their gardens.

Unless indicated by a •, one or more editions of these titles are available to PHS members through the PHS Library.

+ selected more than once

• not available in the PHS Library

- The Adventurous Gardener*, Christopher Lloyd, Random House, NY, 1983
- The American Gardener: A Sampler*, edited by Allen Lacy, Farrar, Straus & Giroux, NY, 1988
- +++ *America's Garden Book*, Louise and James Bush-Brown, Revised edition, NY Botanical Gardens Staff, Scribner, NY, 1980
- *Andy Goldsworthy: A Collaboration with Nature*, Andy Goldsworthy, Harry N. Abrams, Inc., NY, 1990
- Aristocrats of the Garden*, E.H. Wilson, Stratford & Co., Boston, 1932
- *Asa Gray: American Botanist, Friend of Darwin*, A. Hunter DuPree, Johns Hopkins University Press, Baltimore, MD, 1988
- *At Seventy: A Journal*, May Sarton, W.W. Norton, NY, 1987
- *Beyond Your Doorstep: A Handbook to the Country*, Hal Borland, Alfred A. Knopf, NY, 1962 (out of print)
- *Changes in the Land: Indians, Colonists, and the Ecology of New England*, William Cronin, Hill & Wang, NY, 1983
- Charles Cresson on the American Flower Garden*, Charles Cresson, Prentice Hall, NY, 1993
- China: Mother of Gardens*, E.H. Wilson, Stratford & Co., Boston, 1929
- *Country Flowers: Wild Classics for the Contemporary Garden*, Rob Proctor, Harper Collins, NY, 1991
- Design With Nature*, Ian L. McHarg, Natural History Press, Garden City, NY, 1969
- *Designs for American Gardens: A Guide With Complete Plans, Growing Information, & Hundreds of Recommended Plants*, Alice Recknagel Ireys, Prentice Hall, NY 1991
- The Dry Garden*, Beth Chatto, J.M. Dent, London, England, 1978

Einzug der Gräser und Farne in die Garten, Karl Foerster, Nauman Verlag, 1988

The English Flower Garden, William Robinson, 15th edition reprint with forward by Henry Mitchell, Amaryllis Press, NY, 1984

The Englishwoman's Garden, Ailide Lees-Milne and Rosemary Verey, Chatto & Windus, London, England, 1980

++++ *The Essential Earthman*, Henry Mitchell, Indiana University Press, Bloomington, IL, 1981

The Exuberant Garden and the Controlling Hand, William H. Frederick, Jr., Little, Brown & Co., Boston, 1992

• *A Flower for Every Day*, Margery Fish (out of print)

The Garden Art of Japan, Masao Hayakawa, Weatherill, NY, 1979

Garden in Your House, revised edition, Ernesta D. Ballard, Harper & Row, 1971

• *Garden Making*, Elsa Rehman, Houghton Mifflin, Boston, 1926 (out of print)

The Gardener's Year, Karel Capek, Putnam, NY, 1931: Univ. of Wisconsin Press, WI, 1984 (paperback)

Gardens in Winter, Elizabeth Lawrence, Harper, NY, 1961

++ *The Gardens of Winterthur*, Harold Bruce, Viking Press, NY, 1968

Gardens, Plants and Man, Carlton B. Lees, Prentice Hall, Englewood Cliffs, NJ, 1970

The Golden Age of American Gardens, Mac Griswold and Eleanor Weller, H.N. Abrams, NY, 1991

+++ *Green Thoughts — A Writer in the Garden*, Eleanor Perenyi, Random House, NY, 1981

The Green Thumb Book of Fruit and Vegetable Gardening, George Abraham, Prentice Hall, Englewood Cliffs, NJ, 1971

++ *The Hillier Manual of Trees and Shrubs*, 6th edition, Newton Abbot, Devon, England, 1991

How to Grow Wildflowers and Wild Shrubs and Trees in Your Garden, Hal Bruce, Alfred A. Knopf, NY, 1976

How to Plan Your Own Home Landscape, Nelva M. Weber, Bobbs-Merrill, NY, 1976

dozens of books on my list; among them I'd put *Perennial Garden Plants* by Graham Stuart Thomas, *A Southern Garden* by Elizabeth Lawrence, *The Hillier Manual of Trees and Shrubs*, and *The Well Tempered Garden* by Christopher Lloyd."

The only nurseryman who responded to my query was Allen Bush. His selections, reported without comment, were: *The Unsettling of America* by Wendell Berry, *A Southern Garden* by Elizabeth Lawrence and the folk tale *Jack and the Beanstalk*.

* * *

Gardeners living in or near the Delaware Valley are fortunate to have access to horticultural hubs like The Scott Arboretum, The Morris Arboretum of the University of Pennsylvania, Longwood Gardens and the Mt. Cuba Center for the Study of Piedmont Flora. I suspected that the book choices of

"I also return to Hal Borland's natural-history books, especially *Beyond Your Doorstep: A Handbook to the Country*. Again, this is not a gardening book, but it sets a frame for the larger garden, without which our little borders have shallow meaning. His prose is clear and crisp as a frosty November night. Indeed, it is timeless, because it speaks of age-old truths without pomposity or ecological correctness."

Frederick McGourty

their directors and staff would be intriguing, and I wasn't disappointed.

"All three of my books have nature in the title," wrote Claire Sawyers, "more by chance than by design. Though these books are very different in their essence, I believe

each is a classic or destined to be a classic and together create a provocative look at our relationship and place in nature and our opportunities to be inspired by nature. In *Design With Nature*, Ian L. McHarg, chairman of the Department of Landscape Architecture at the University of Pennsylvania for many years, describes ecological planning methods in a way that makes us look and think about design, land use and planning in a different way. I found *Andy Goldsworthy: A Collaboration with Nature* at a dinner party, and I couldn't put it down. It is a picture book of Andy Goldsworthy's sculptures, which are made of leaves, rocks, petals, twigs, etc. — the elements of nature; the elements of garden-making. The creativity and sensitivity of his work truly inspires. And Michael Pollan, an editor by profession and gardener by avocation, has written about his education as a gardener in

continued

In Your Garden, Vita Sackville-West, Michael Joseph, London, England, 1951

Jack and The Beanstalk

- *Journal of a Solitude*, May Sarton, W.W. Norton, NY, 1973
- Making Things Grow*, Thalassa Cruso, Alfred A. Knopf, NY, 1970

Modern Gardens, Master Works of International Garden Architecture, Peter Shepherd, Frederick A. Praeger, NY, 1954

A Natural History of Trees in Eastern and Central North America, Donald Culross Peattie, Houghton Mifflin, Boston, 1950

Old Time Gardens, Alice Morse Earle, Macmillan, NY, 1901

- +++ *100 Great Garden Plants*, William H. Frederick, Jr., Alfred A. Knopf, NY, 1975; 2nd edition, Timber Press, Portland, OR, 1986

One Man's Garden, Henry Mitchell, Houghton Mifflin Co., Boston, 1992

Onward and Upward in the Garden, Katherine S. White, Farrar Straus Giroux, NY, 1979

The Opinionated Gardener, Geoffrey B. Charlesworth, David R. Godine, Boston, 1988

- *Orlando*, Virginia Woolf, Harcourt, Brace Javanovich, NY, 1973 (paperback)
- ++ *Perennial Garden Plants*, 3rd edition revised, Graham Stuart Thomas, Sagapress/Timber Press, Portland, OR, 1990
- The Perennial Gardener*, Frederick McGourty, Houghton Mifflin, Boston, 1989
- Plant Dreaming Deep*, May Sarton, W.W. Norton, NY, 1968

Reading the Landscape of America, May Watts, Revised and Expanded, Collier, 1975; Macmillan, NY, 1957

- ++ *Second Nature: A Gardener's Education*, Michael Pollan, Atlantic Monthly Press, NY, 1991
- +++ *The Secret Garden*, Frances Hodgson Burnett, H.P. Lippincott, NY, 1962
- *Sometimes A Great Notion*, Ken Kesey, Penguin Books, NY, 1977

- +++ *A Southern Garden: A Handbook for the Middle South*, Elizabeth Lawrence, Revised, University of North Carolina Press, 1967

The Startling Jungle, Stephen Lacey, David R. Godine, Boston, 1990

The Story of Gardening, Richardson Wright, Dodd, Mead & Co., 1934

Taylor's Encyclopedia of Gardening, 4th Edition, Houghton Mifflin Co., Boston, 1961

This Green World, Rutherford Platt, Dodd, Mead & Co., 1943

To Everything There Is A Season, Thalassa Cruso, Alfred A. Knopf, NY, 1973

Travels Through North and South Carolina, Georgia, East and West Florida (along with Botanical and Zoological Drawings, 1756-1788), William Bartram, facsimile published by University Press of Virginia, Charlottesville, VA, 1980

Trees for American Gardens, Donald Wyman, Macmillan, NY, 1990

- ++ *The Tropical Gardens of Burle Marx*, P.M. Bardi, Reinhold Publishing Co., NY, 1964

The Unsettling of America: Culture and Agriculture, Wendell Berry, Sierra, 1977

- +++ *Vita Sackville-West's Garden Book*, Michael Joseph, London, England, 1968

Vita's Other World: A Gardening Biography of Vita Sackville-West, Jane Brown, Viking, NY, 1985

- *Watchers at the Pond*, Franklin Russell, David R. Godine, Boston, 1981
- *Weeds and Aliens*, E.J. Salisbury, 1961 (out of print)

The Well Tempered Garden, Christopher Lloyd, Random House, NY, 1985; Dutton, NY, 1971

The Wild Gardener in the Wild Landscape: The Art of Naturalistic Landscaping, Warren G. Kenfield, Hafner, NY, 1966

Wood and Garden, Gertrude Jekyll, Revised, intro by G.S. Thomas, Ayer, Salem, NH, 1983

The Woodlands Orchids, Frederick Boyle, Macmillan & Co., Ltd., London, England, 1901

an entertaining and captivating way in *Second Nature: A Gardener's Education*."

Paul W. Meyer elected two volumes that he said have shaped the way he views trees in the landscape. *China: Mother of Gardens* by E.H. Wilson, "A wonderful account of Wilson's travels in China at the turn of the century. It gives cultural and historic perspective to many of our widely used garden plants from China." And *A Natural History of Trees in Eastern & Central North America* by Donald Culross Peattie: "A book rich with lore and anecdotes about the finest trees native to Eastern North America. It gives every species its own personality."

Richard W. Lighty described his three books as important way-stations in his development as a gardener. He said that the refinement of insights he gained from them has involved countless other books, articles, garden visits and conversations. His selections: "*The Wild Gardener in the Wild Landscape: The Art of Naturalistic Landscaping* by Warren G. Kenfield opened my eyes to the intelligent use of herbicides and machinery to control growth of desirable and undesirable plants. Since controlling growth is the single greatest consumer of time and effort in the garden, this book and the next have saved me, literally, years of unneeded effort . . . Building on the first book, *Weeds and Aliens* by E.J. Salisbury, brought home to me the diverse and wonderful strategies that weeds employ to circumvent the gardener's attempts to eradicate them. This has helped me with the cultivation of ornamentals." And finally, *The Tropical Gardens of Burle Marx* by P.M. Bardi: "Here's the kind of gardening I want to do, and it can be done with temperate plants in temperate climes."

In his response, Rick Darke revealed that his garden inspiration comes mostly from reading landscapes as he travels. "I read few books specifically on garden design. I'm more inclined to biographies of botanists, architects, and the like. My favorite, *Asa Gray: American Botanist, Friend of Darwin* by A. Hunter DuPree conveyed to me early in my career excitement and wonder at the richness of our native North American flora." His other recommendations: *How to Grow Wildflowers and Wild Shrubs and Trees in Your Garden* by Hal Bruce "Beautifully written; combines observation of nature and natural landscapes with practical garden-making." *Einzug der Graser und Garne in die Garten* by Karl Foerster "This book with its inspiring photography and plant selections has been very influential."

William Thomas finds Christopher Lloyd's



"I like a garden in which plants have been growing in one spot for a long time, where they have a fixed home and surroundings. In our garden the same flowers shoulder each other comfortable and crowd each other a little, year after year. They look, my sister says, like long-established neighbors, like old family friends, not as if they just "moved in," and didn't know each other's names and faces. Plants grow better when they are among flower friends."

Old Time Gardens
Alice Morse Earle

writing inspiring. "I remember one November when I was tired of gardening, I sat outside in the sun reading *The Adventurous Gardener* and got so recharged that within a half hour I was pulling weeds." His other choices were *Orlando* by Virginia Woolf and *In Your Garden* by Vita Sackville-West.

William H. Frederick, Jr.'s *100 Great Garden Plants* again appeared on the favorites list, this time on Pat Christopher's. "Enthusiastic descriptions of excellent plants, their culture and history, make a gardener want to grow all of them. Bill Frederick's ideas for using the plants in combinations give direction and discipline to the exuberant interest he creates." Of *The Garden Art of Japan* she wrote: "Japanese gardens are intensely personal and individualistic places where a person can feel at home with nature. Masao Hayakawa helps us appreciate the beauty of these gardens and the skills involved in creating them." Pat Christopher's third choice was *Watchers at the Pond* by Franklin Russell. "These three choices are significant, watershed books for me, but there is

also May Sarton's *Plant Dreaming Deep*, Hal Bruce's *The Gardens of Winterthur*, Stephen Lacey's *The Startling Jungle* and, from childhood, *The Secret Garden*.

* * *

J.C. Raulston's response, detailed and rational, were selected from three categories:

Psychological Influence. *The Secret Garden*: A book I read as a child in grade school but did not fully appreciate until in my 40s when I began to understand that gardens and plants are in the book, and were in my life, safe places to experiment and grow without the threat sometimes inherent in adult human contact. To learn without fear of failure, without criticism, without expectation.

Technical Influence. *The Hillier Manual of Trees and Shrubs* exponentially expanded my awareness of the range of woody plant species and cultivars that existed. And that, of course, set new challenges to find and acquire them all.

Crackling-Fireplace-With-Buttered-Popcorn Pleasure of Reading Influence. *The Essential Earthman* by Henry Mitchell: A book with wonderful wit and satire surrounding first-hand experience, knowledge of the joys and tribulations, the nobility and the foibles of compulsively addicted gardeners. As I head into the seventh reading of my worn copy I will again chuckle and wonder and learn from this marvelous book."

What book has J.C. given as a gift to many friends? *Second Nature: A Gardener's Education* by Michael Pollan. "The adult version of the psychology of why we garden and what it means."

When I wondered what books an Englishman now gardening and writing in this country would recommend, I turned to Christopher Woods. Only one of his selections was British: *Perennial Garden Plants* by Graham Stuart Thomas, "A book full of personal anecdotes and information concerning the English style of 'cottage' gardening. Thomas's observations of border design are essential for an understanding of English gardening as well as a suitable jumping-off point for creating the Anglo-American garden." Woods liked *The Golden Age of American Gardens* by Griswold and Weller for "a thorough history of private gardens from 1890 to 1940 detailing the eccentricities and talents of owners and designers. A quote from the book sums up part of my philosophy about gardening '... it is not simply beets and potatoes and corn and string beans that one raises . . . it is the average of human life'."

photos by Richard L. Biner

Woods's third choice was the novel, *Sometimes a Great Notion* by Ken Kesey. "A celebration of the American individual. One of the great contemporary American novels that taught this Englishman the value of being true to oneself."

* * *

The three writers who have most influenced my own approach to gardening: Henry Mitchell, William H. Frederick, Jr., and May Sarton. Henry Mitchell, another gardener who wants one of every plant, taught me that it's OK not to be satisfied with my garden. His books *The Essential Earthman* and *One Man's Garden* are practical, irreverent, informative, and make me laugh out loud. Frederick's books, *100 Great Garden Plants* and *The Exuberant Garden and the Controlling Hand* disciplined me to look for form and character in the garden and to think about plant associations. May Sarton's love of solitude, joy of nature and power to endure as revealed in her journals has changed my life. She is one of the great spirits of our time.

Clearly books have changed the way we garden and look at gardens. It appears from



"A gardener, by my definition, is anyone whose curiosity has been piqued by even a single living plant and who feels even the slightest urge to experience the joy of placing a few plants together in the earth to achieve an effect."

100 Great Garden Plants
William H. Frederick, Jr.

our poll that not only how-to and reference texts but books of art, photography and essays, as well as novels and biographies, have been central to our gardening experience. *Green Scene* respondents' choices also reflect a prevailing interest not only in contemporary American garden writers but a renewed regard for those of the early decades of this century.

My thanks for the thoughtful and provocative replies to my question which were solicited during the peak summer gardening season, which reinforces something Chris Woods wrote: that books are an addition to gardening and not a substitute. The best way to learn about horticulture is to do it yourself, yet I can't help feeling that sharing through books makes it all more interesting and fun. In the meantime, Happy Winter reading and dreaming!

•

Richard Bitner is an anesthesiologist by profession and teaching assistant at Longwood Gardens by avocation. He gardens and reads on an old farm in Lancaster County with his dogs Sarton and Phoebe and his cat Vita Sackville-West.

LETTERS TO THE EDITOR

Problem Plants

I was distressed to read in the July issue "Gardening at the Jersey Shore" a recommendation for loosestrife, *Lythrum salicaria*. This plant is non-native and so invasive that much time and money are required to control it in natural areas such as the John Heinz Natural Wildlife Refuge at Tinicum. It crowds out native wetland vegetation that is vital to the food chain in the wetlands.

I suggest that you notify your writers of the pernicious exotic plants that can escape from gardens by birds dropping seeds from berries in natural areas. The Eastern Deciduous Forest is declining due to several factors, including vines smothering young trees. Norway maple and Russian olive can also outcompete native trees and diminish biodiversity and disrupt the food chain. The following are plants that should never be recommended to gardeners, although I have seen them offered for sale at nearby

nurseries: Japanese honeysuckle (*Lonicera japonica*), porcelain berry (*Ampelopsis brevipedunculata*), Oriental bittersweet (*Celastrus orbiculatus*), Japanese knotwood (*Polygonum cuspidatum*), Norway maple (*Acer platanoides*), Russian olive (*Elaeagnus angustifolia*), autumn olive (*Eleagnus umbellata*).

I would be happy to discuss this topic if you have any comments or questions.

Barbara F. Grove
Research Associate, Natural Lands Trust
Swarthmore, PA

Squirrel-proof Feeders

Enclosed please find photos of an absolutely squirrel-proof bird feeder — enclosed on three sides. Every type of bird feeds in this and figures out the entryway quickly.

The post has stovepipe around it and the feeder is plexiglass with a plywood base. NO SQUIRRELS.

My husband designed it.

Eileen & Philip Askey
Askey Landscapes
Wallingford, PA




photo by Askey





NO DEER ALLOWED

 by JBL*

A suburban gardener puts up a fence that seems to be keeping out the invading deer.

For many years deer have crossed our property in large numbers. Although long ago we erected the usual wire fence around the roses, the deer continued to eat the tulips, new growth on young yew and much else.

Nearly one-third of our two-acre property in the Gladwyne-Villanova area has been surrounded by high walls and a picket fence. In March of this year I decided to fence in the rest of the property, or almost all of it, using materials that a relative had found to be effective in her Maine garden.

My new fence has been simple to erect, inexpensive, inconspicuous, and up to this point very effective, overcoming the skepticism of our part-time gardener who did the work.

I bought sturdy wooden garden stakes six feet high and one inch wide on all four sides costing \$1.95 each. From my fishing tackle store I then bought spools of monofilament, the colorless, translucent material used in fishing. The spool of 100 yards length — 100 pound test, which I recommend, cost \$4.20 and the 240-yard spool — 50 pound test, \$4.30.

The perimeter of our property has both

open areas and heavily wooded areas. In the open spaces along the perimeter we drove the stakes into the ground leaving 5 ft. or so above ground, and we placed them in a line 12 ft. apart. Next, we tied the filament securely on the first stake at a height of 1½ ft. above ground. We then wrapped the filament around succeeding stakes at the same level going along this way for three to five stakes. At the last selected stake it was securely tied. On the same stakes, we repeated the process two or three times with each new strand a foot above the lower strand, ending up with a segment of fence consisting of three or four strands of filament, the highest strand

We have had tulips for the first time in years.

being about five ft. above ground. We continued this line of fence with new stakes and filament but where trees were available at appropriate distances we merely wrapped the filament around the trunk regardless of its size, using the trees instead of the stakes with the same effect.

Sitting on our terrace I cannot see the strands of filament; I see only the stakes that I've painted with a brown spray paint to make them less conspicuous. I tied a rag to some strands as a warning sign to neighbors. My helper, a fast, intelligent worker, probably did the entire job in two to three hours.

The stakes have neither been broken, damaged nor knocked down. One or two strands of filament, however, were broken

by fallen branches and quite possibly three or four strands by deer. All of these broken strands were the more fragile 50-pound test filament. But never have all the strands in any spot been downed.

Clearly, the deer could break the stakes or leap over the fence, but we have had tulips for the first time in years and there is no longer a deer thoroughfare through the property as there was before.

In July a few deer may have been on the property, although rabbits may have been the nibbling culprits. There is no evidence, however, that intruding deer have either leapt the fence nor come through any part of it.

The only area now unfenced is the driveway entrance that gives limited access to the entire property. With very little additional fencing I can enclose the garden and most of the lawn. This, nevertheless, would require some sort of wire gate to permit entering or leaving. An alternative would be a cattle grid in the driveway.

The happy part of the whole project has been that the fencing seems to have confused the deer. It has withstood a few assaults and has clearly stopped the deer pathway through the property. The trial period has been but a few months, and my hope and best guess is that the fencing will come to be regarded as almost foolproof. That is certainly the case up to this point.

Editor's Note: Readers suggestions for additional ways to prevent deer from destroying plantings are welcome.

*The author prefers to remain anonymous.

TREE RESCUERS

Landscape designer Chris Travis calls them "the lost trees." They are horticulture's ugly ducklings, specimens never allowed to achieve their full potential.

Unbeknownst to most gardeners, hundreds of such trees are bulldozed yearly on nursery properties because they are too large to be sold. Other trees languish in the weed-infested growth of abandoned nurseries waiting to be developed. And still others face destruction because no one really knows what else to do with them.

Travis sees this as a horticultural tragedy. He works closely with Mike Schwartz, principal of Tree Transfers, Inc., to rescue many of these "lost trees" and to ensure

The eight-foot ball required a 50-ton crane to get it to its final destination on the Zoo's birdhouse lawn.

that they are placed at sites where their underlying beauty can once again be appreciated.

Probably the most well-known mission undertaken by these two plant salvagers occurred in 1990 when they arranged for a Japanese cutleaf maple (*Acer palmatum* 'Dissectum') to be moved to the Philadelphia Zoo.

The tree was a large, venerable specimen, close to a century old. It was also in the wrong place, an area in Media, Pennsylvania, that was to be cleared. The contractor, Marc Zaid, said it would be a waste to destroy such a magnificent tree. Familiar with the work of Travis and Schwartz, he asked the two if they would use their horticultural contacts to find a home for it.

Though Travis and Schwartz tried, no one made a bid for the maple. Its fate as a lost tree, one that would never be seen or admired again, seemed assured. In desperation the two suggested that perhaps an institution would accept the tree as a donation. With the bulldozer deadline looming, Zaid agreed.

Several phone calls later, the two reported back to Zaid that the Philadelphia Zoo would be most grateful to have the tree. The eight-foot ball required a 50-ton crane to get it to its final destination on the Zoo's birdhouse lawn.

Salvaging trees, it should be noted, is not

photos by Mike Schwartz



A 50-ton crane hoists a Japanese cutleaf maple (*Acer palmatum* 'Dissectum') so that the bottom lacing can be tied to the ball before moving the tree to a new site. Over 100 pounds of twine and burlap were used.



Top: A 40-foot tractor trailer carrying the tarp-covered Japanese cutleaf maple negotiates the Zoo's footpaths *en route* to the tree's new home. **Bottom:** The salvaged maple now thrives at the Zoo where many people enjoy its splendor.

the principal business activity of either Travis or Schwartz. The two do it because they love plants and hate to see any needlessly destroyed. And because they are businessmen, they manage to undertake such work profitably.

Though the two work closely together, each is independent. Travis specializes in landscape design for urban settings and Schwartz's Tree Transfers, Inc. in moving large plants.

The two do collaborate in buying and selling plants, typically large, semi-mature trees and shrubs. "As locators, we find specimens that others have not been able to track down through conventional efforts," Schwartz explains. "We fill a small but useful niche in the horticultural field."

Because large plants are not readily available (at a certain size, they are generally destroyed), an inventory of what's available is essential. Travis and Schwartz spend about 25% of their business hours conducting such inventories, travelling all along the East Coast, usually during winter and the high heat of summer.

Schwartz has the computerized records and also relies on Travis's "trap-like mind and extensive color photograph collection."

Horticultural contacts are crucial not only to their work but also to their rescue missions. Many growers and nursery people dislike destroying plants but have no economic alternative to doing so. They often invite the two to examine stock scheduled for extermination in hopes that some use will be found for it.

For example, trees in an apple orchard in Plainsboro, New Jersey, are periodically culled to make room for new varieties. Knowing that such thinning is scheduled, Travis keeps alert for design possibilities that will incorporate such trees.

Thus, when a landscape architect called and wanted to know if he could locate mature apple trees, Travis arranged to have 16 from the Plainsboro orchard moved to Mendham, New Jersey. There they now sweep up both sides of the driveway leading to the main house.

One of the finest examples of their rescue work can be seen at the recently completed Grounds for Sculpture garden, which covers 16 acres at the Johnson Atelier in Trenton, New Jersey. Chris and Mike became involved in the project when they were contracted to find large, exotic tree and shrubs to be used on the property.



Top left: A stand of overgrown upright Japanese maples (*Acer palmatum*) are machine-dug at an abandoned nursery for the new courtyard. **Top right:** Asymmetrical trunks of Japanese maples are being precisely planted to contrast with the architect's symmetrical grid pattern. **Bottom:** The leafy canopy of the transplanted maples grace the new courtyard, sheltering a bronze sculpture by St. Claire Cemin.

The garden architect, Brian Carey, knew of an abandoned nursery and asked Travis and Schwartz to accompany him on a scouting trip for suitable plants. Fortunately, Travis had inventoried the plants on the property five years earlier, noting a stand of Japanese maples (*Acer palmatum*) and, upon arrival at the site, he located them.

Literally hacking a path through the weeds to find the now completely over-

The ungainly plants were twisted and deformed as they fought each other for space and light. Carey looked at these imperfect plants and envisioned a stunning courtyard setting for them. The ungainly trunks became, in his eye, sculptured forms.

grown stand of Japanese maples, Travis said that he wished the three of them had been there a decade ago.

When asked why, Travis explained that the stand was planted closely together to be sold as small trees. Now the ungainly plants were twisted and deformed as they fought each other for space and light.

Carey looked at these imperfect plants and envisioned a stunning courtyard setting for them. The ungainly trunks became, in his eye, sculptured forms. The gray bark, clearly visible because there had been little room for leafy branches, was transformed into a vertical color scheme. Gray pebbles at the base of the courtyard were placed as a horizontal complement. Light filtering through the sparsely leafed branches would create a kinetic sculpture of shade patterns.

Visitors to the sculpture garden can see Carey's conceptual vision transformed into a stunning reality. Such a courtyard design could not have been created with "perfect" plant specimens.

Help Rescue Trees

Green Scene readers who know of large, exotic trees or shrubs about to be destroyed or languishing in abandoned neglect are welcome to contact Travis or Schwartz. Write a brief description of the plant, include your name, address, and phone number and send the information to Tree Transfers, Inc., P.O. Box 26731, Elkins Park, PA 19117 (FAX 215/635-0746) or Chris Travis, Assoc., P.O. Box 213, Roosevelt, NJ 08555 (FAX 609/490-0975).



At top: An arboreal sculpture in itself: A six-plant series of intertwined weeping Atlas cedars are prepared for transplanting to a New Jersey sculpture garden. Individual boughs from each plant were traced and color-coded to facilitate the delicate separation procedure employing a crane. **Bottom:** Two years after transplanting, the cedars appear to have been growing forever in the sculpture garden.

On another part of the Johnson property, a magnificent stretch of weeping blue atlas cedar (*Cedrus atlantica* 'Glauca Pendula') stands as a hedge sculpture. These plants were so large that the nursery where they were grown no longer carried them in their inventory list.

The cedars, however, appeared on Travis and Schwartz's inventory. When the architect asked for a suggested planting in the designated area, they recommended the cedars. The trees, which were almost at the point of being untransplantable, now make a magnificent visual display.

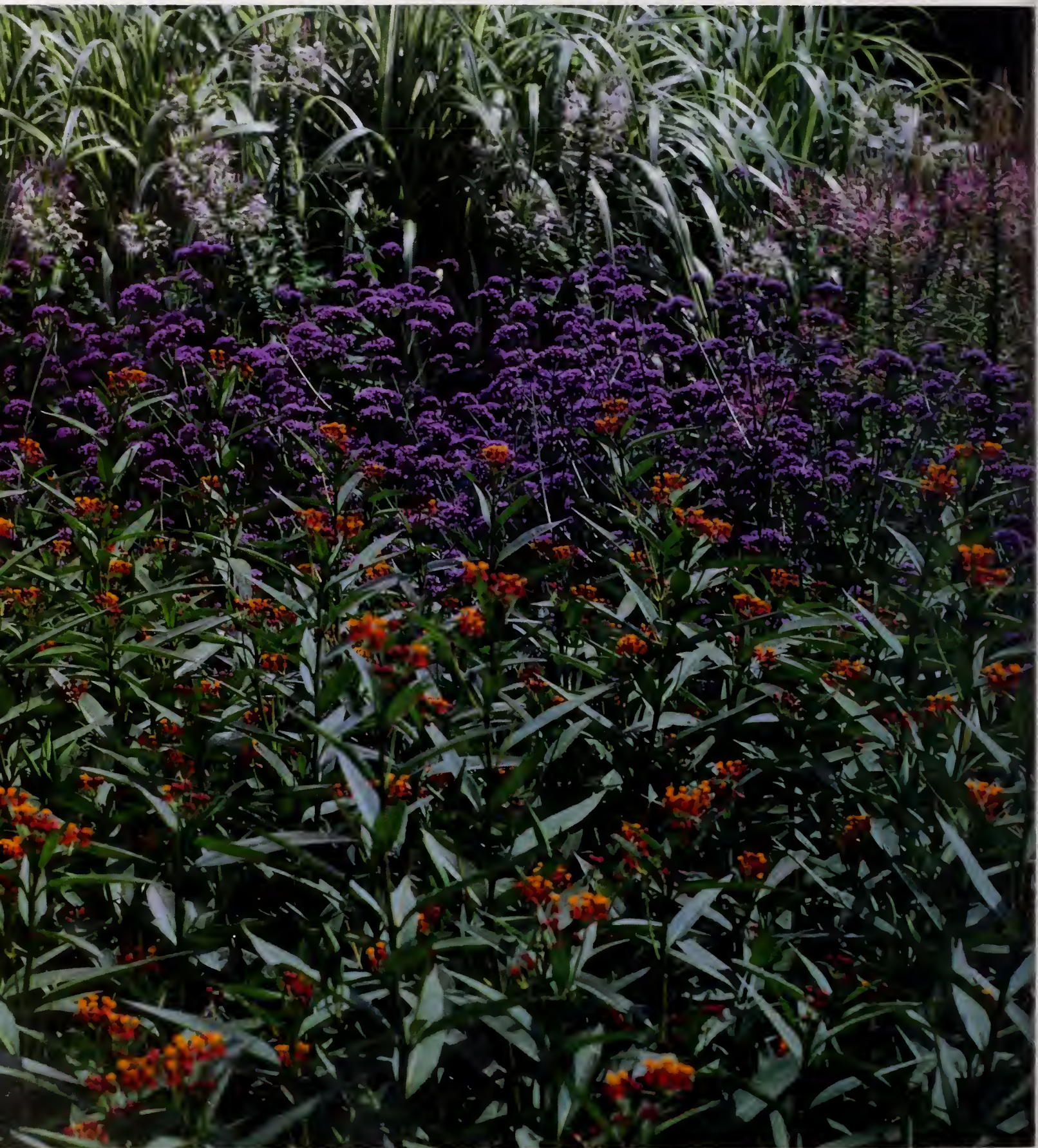
"To see these cedars, as well as all the other plants we've relocated, is so satisfying," Schwartz comments.

Travis adds: "We remember the plants as they were when we first found them and then delight in seeing them placed so that others can admire the fullness of their beauty."

While Travis and Schwartz readily concede that their work represents just a small niche in the horticultural world, they will argue that it is for them the most personally gratifying. There's little need for them to argue the point, however, as there aren't many who would disagree with such a sentiment.

Patricia Taylor's *Easy Care Shade Flowers* was published by Simon & Schuster, N.Y., in February, '93.

Four Exceptional, U



Asclepias curassavica (orange in foreground) and *Verbena bonariensis* (lavender) planted together here, have an electrifying impact and attract Monarch and other butterflies to the garden. Flowering begins in mid-June and continues unabated well into the fall.

Underappreciated Plants by Harriet L. Cramer

I include myself among the admittedly obsessive gardeners who anxiously await the arrival of the new fall and spring plant catalogs. We drool over the pictures and descriptions of the latest offerings, wondering to ourselves if that new rhododendron cultivar is *really* as floriferous as it looks and how can \$30 for a single specimen of hosta be justified to those who already believe we have gone far over the edge in our gardening zeal.

The real danger with this mania to possess the newest plants, other than the expense involved, is the inevitability of disappointment. This is something we have all experienced: the flashy yarrow cultivar, for example, that bloomed for two weeks and then turned brown and flopped over; the phlox that flowered beautifully but succumbed to a ruinous case of powdery mildew; the expensive rose whose growth habit could only be described as grotesque; or the daylily whose flower color and shape lead one to conclude that legal limits should be placed on the further hybridization of this genus.

Gardeners are a hardy and optimistic lot, however, and experimentation is one of the joys of gardening. The discovery of an exceptional plant, one that lives up to or exceeds our expectations, is what sustains us through the disappointments. An exceptional plant is one that is attractive over a long period of time. It may not flower for more than a week or two, but is perhaps distinguished by its form, texture, foliage or fruit. I would further define an exceptional plant as one that is not commonplace, works well in combination with other plants, is generally pest and disease resistant, is not too difficult to locate and/or propagate, has minimal maintenance requirements, holds up well through our hot, humid summers, and attracts birds or butterflies to the garden. Four little-known plants have particularly impressed me as being truly exceptional, namely *Asclepias curassavica* (bloodflower), *Verbena bonariensis*, *Kalimeris integrifolia* and *Buddleia* x 'Lochin' (butterfly bush).

Asclepias curassavica (Bloodflower)

I have grown several different species of plants in the milkweed (*Asclepiadaceae*) family, and I quite honestly like them all. The well-known native milkweeds, *Asclepias tuberosa* (butterfly weed) and *A. incarnata* (swamp milkweed), are long-blooming and trouble-free perennials that never fail to draw hordes of butterflies. *Asclepias curassavica* has the same intriguing seedpods and poisonous milky sap typical of



Asclepias curassavica (bloodflower) is distinguished by its graceful, willowy leaves, bright scarlet buds and orange-yellow umbels.

this family, but the flowers and foliage of this South American native make the other milkweeds look like dowdy cousins.

The bloodflower begins to bloom in mid-June as clusters of small, scarlet buds appear. The tiny individual flowers unfold continuously throughout the summer and well into fall in shades of yellow and deep

The flowers and foliage of Asclepias curassavica, a South American native, make the other milkweeds look like dowdy cousins.

orange, forming axillary umbels 3-4" wide. The scarlet, orange and yellow colors are especially vibrant against the long, willowy leaves that are dark green on top and a paler bluish-green on the underside. The flowers need no deadheading or cutting back to keep the plants constantly blooming. They are excellent as cut flowers, incidentally, though the stems must be seared upon cutting.

Asclepias curassavica should be planted in full sun and prefers somewhat moist soil. It really takes off when the soil warms up and thrives in our sticky summer weather.

Growing to about 3 ft. tall, the bloodflower has an attractive branching habit but should be underplanted because the lower leaves tend to drop off. It is clearly most effective when planted in groups of three or more, especially with companions that accentuate its brightly hued flowers and the bluish cast of its foliage. Bloodflowers are stunning, for instance, underplanted with *Salvia farinacea* or *Calamintha nepetoides*. In my own garden I plant *Asclepias curassavica* behind *Coreopsis* 'Moonbeam' and in front of *Heliopsis decapetalus* and *Calamagrostis* x *acutiflora* 'Karl Foerster' — the impact is both dramatic and longlasting. At the University of Pennsylvania's Morris Arboretum the hot colors of the bloodflowers combined with *Verbena bonariensis* take your breath away and attract a startling profusion of butterflies throughout the summer and early fall.

While bloodflowers are perennials in their native habitat (they are in fact considered pantropic weeds), they are hardy only to Zone 8 and are unquestionably annuals in our area. They are easily propagated by cuttings or by seed started indoors in late winter. Stratification of the seeds may give you a higher germination rate, and seedlings can be safely planted outdoors 18 in. apart in late May. The only problem I have encountered with *Asclepias curassavica* is that Monarch butterflies lay their pale green eggs on the leaves of this and other milkweeds and the resultant larva sometimes eat a few plants. The damage inflicted by the caterpillars, however, pales relative to the pleasure of observing the graceful creatures that emerge a short time later. If the caterpillars become too bothersome, they can be concentrated on one or two sacrificial plants or moved to less desirable members of the milkweed family.

Verbena bonariensis

I am fed up with hybrid verbenas. I've tried them repeatedly in pots, window-boxes and beds and inevitably I rip out the sticky, mildewed remains in disgust by the end of July. I have enough to feel guilty about without adding the premature death of unsuspecting plants. I was thus understandably skeptical when I first heard how glorious and carefree is *Verbena bonariensis*. This strange and eye-catching plant is unlike any verbenas I had seen before and is virtually trouble-free. Its Latin name (there is no common name) is derived from Buenos Aires ("good air"), where it was initially discovered. This was the first American verbenas to be imported to Eng-



Left: The clear white, daisy-like flowers of *Kalimeris integrifolia* will brighten a partially shady spot, whether planted alone or in great sweeps. **Right:** *Buddleia* x 'Lochinch' is covered in lavender-blue flowers beginning in mid-July. The flowers and bluish-gray foliage are especially vibrant underplanted with brightly colored foliage or flowers. 'Lochinch' is used here with *Imperata cylindrica* 'Red Baron' (right foreground), *Panicum virgatum* 'Hanse Herms' (left), and *Artemisia* 'Powis Castle' (front).

land in the early 1700s, though it seems not to have been widely appreciated until quite recently. Even today nurseries have trouble selling it because of its odd appearance. *Verbena bonariensis* is a stiff, upright, weirdly branching plant that somehow manages to be gawky and graceful at the same time. It grows to 4 ft. tall but is very much a see-through plant and thus best placed in the front or middle of the garden. It has square, four-angled stems supporting small, deep lavender corymbs from June until frost. The flowers will invariably attract Monarch, Swallowtail and other butterflies in mid-summer, and in late fall they take on a decidedly reddish cast. The foliage is about 4 in. long, narrow, leathery and surprisingly sparse.

Verbena bonariensis will be most effective grouped together. It needs full sun and reasonably well-drained soil and is otherwise undemanding. I always cut the stems back a foot or more after the first flush of bloom to encourage lateral branching and avoid the floppiness that might otherwise occur later in the season. The flowers are wonderful albeit messy in arrangements, and cutting them regularly is a practical means of keeping the plants tidy. Powdery mildew may appear on the lowest leaves if air circulation is poor, but rarely to the extent that the plant becomes unsightly.

The interesting form and flower color of *Verbena bonariensis* enable it to be combined well with a diversity of plants. I like it best with the bright red-, orange-, and

yellow-colored flowers so evocative of mid-summer. It is spectacular, for example, in front of Mexican sunflower (*Tithonia rotundifolia* 'Torch') or with *Zinnia linearis* weaving through it. This easygoing verbena thoroughly pleases combined with such pink-flowering and contrasting foliage plants as *Rosa* 'The Fairy' and *Cleome* 'Rose Queen.'

Verbena bonariensis is hardy only to Zone 7A, but will reliably self-sow in our area. It typically self-sows quite heavily, in fact, and should be thinned out in early spring to avoid overcrowding. It will usually seed itself where it had previously been planted, though wind-borne seeds may cause new plants to sprout in the most curious places. These acts of chance are

rarely a problem, as the cheery purple corymbs are a welcome sight popping up here and there and unwanted seedlings are easily removed. Seeds can be sown directly either in the fall or in the spring or started indoors in late winter. Seeds grown indoors in a greenhouse or on a sunny windowsill should be covered with newspaper until they sprout and the seedlings should be cut back to about 6 in. before setting them out in late May.

Kalimeris integrifolia

The hot-colored flowers of *Asclepias curassavica* and *Verbena bonariensis* force us to notice them; the charm of *Kalimeris integrifolia* is definitely more subtle. There is little written about this Japanese native, and it is not widely available. Indeed, it is not even clear what is its proper name. It is listed in some catalogs as *Kalimeris integrifolia*, in others as *Kalimeris* species, and in still others as *Kalimeris incisa*, though the description in *Hortus* of the latter is of a totally different plant. What is clear is that this is a lovely, long-blooming perennial deserving of greater attention.

Kalimeris integrifolia is related and similar to both asters and boltonias. Its clean white, daisy-like flowers with yellow centers easily identify this as a member of the *Compositae* family. The flowers are single and begin in late May. The plant blooms heavily through early summer and continues to flower on and off thereafter if cut back aggressively in early July. The foliage is deep green and incised, reminiscent of aster foliage, and handsome from early spring through frost. *Kalimeris integrifolia* performs best planted in well-drained soil with morning sun and afternoon shade and is hardy through Zone 6. It has proven to be rabbit- and deer-resistant (unlike asters and boltonias) and has no serious disease problems.

I prefer to see *Kalimeris* planted in great winding sweeps, though its bushy 2-3 ft. habit and cheerful flowers are also effective as a single specimen in an herbaceous border or in a container. The bright white flowers of *Kalimeris* are especially prominent when underplanted with blue-flowering plants like catmint or plumbago. Regardless of how or where it is used, this is a carefree and engaging plant.

***Buddleia* x 'Lochinch' (Butterfly bush)**

This hybrid butterfly bush consistently attracts more attention than any other plant in our garden at the Morris Arboretum. It is so overwhelmed with Monarch butterflies from mid-July through September that the entire garden appears to be moving in a

gracefully choreographed ballet. The bright orange of the butterflies is particularly prominent against the velvety, grayish-green foliage and violet-blue flowers of 'Lochinch.' The slightly drooping flowers are splashed with tiny orange centers and fragrant as well as beautiful. The pale gray undersides of the leaves create a silvery, hazy impression whenever the wind blows, a very welcome sight in the heat of summer.

***Kalimeris integrifolia* has proven to be rabbit- and deer-resistant (unlike asters and boltonias) and has no serious disease problems.**

Buddleia x 'Lochinch' is thought to have occurred from the chance crossing of *Buddleia fallowiana* with the ubiquitous *B. davidii* in the garden of the Earl of Stair at Lochinch, Scotland. Though presented the prestigious Royal Horticultural Society Award of Garden Merit, 'Lochinch' has yet to catch on in a big way with gardeners. That's surprising because this hybrid butterfly bush is more compact, has a more pleasing shape, and seems to flower longer than most of the more popular *B. davidii* cultivars. Indeed, this butterfly bush will flower far into the fall if periodically deadheaded. *B. x 'Lochinch'*, somewhat less tolerant of very cold weather, however, is hardy only to Zone 6B or 7. I treat it as an herbaceous perennial and cut it back almost to the ground in early spring. It will grow 4-5 ft. tall and requires only that you plant it in full sun in soil that is neither too wet nor too dry. Pest and disease problems have been virtually nonexistent; even the voracious deer at the Arboretum have left 'Lochinch' alone. It is ridiculously easy to propagate, furthermore, either from softwood cuttings taken in summer or hardwood cuttings in winter.

This particular butterfly bush is spectacular planted in large groups if one has the requisite space. In more modest circumstances, *Buddleia* x 'Lochinch' is an excellent addition to any shrub or herbaceous border. The gray stems and foliage and lavender flowers of 'Lochinch' are most dramatic when used with brightly colored annuals, perennials and grasses. It is splendid behind Japanese blood grass (*Imperata cylindrica* 'Red Baron'), for example, or behind the pink-flowering rose mallow (*Lavatera trimestris* 'Grandiflora'). The strong colors of sunflowers, cosmos and bee balm, moreover, assume an almost electrical intensity planted alongside the

grayish blues of 'Lochinch.' It is also well-suited for container plantings, given its restrained habit, strong fragrance and long season of interest. *Buddleia* x 'Lochinch' is in fact an exceptionally versatile plant and its increased availability in recent years a long overdue and welcome development.

* * *

The four plants that I've described have little obviously in common. They each belong to a different family and in flowers, foliage and habit they are not at all alike. What they do share is a tendency to be attractive over an exceptionally long period of time, to cope well with our typical summer weather, to attract desirable wildlife to the garden, and to thrive in reasonable conditions with only limited maintenance. I still want to try that \$30 hosta someday, but in the meantime I am thoroughly content to have such glorious and hardworking plants as *Asclepias curassavica*, *Verbena bonariensis*, *Kalimeris integrifolia* and *Buddleia* x 'Lochinch' in my garden.

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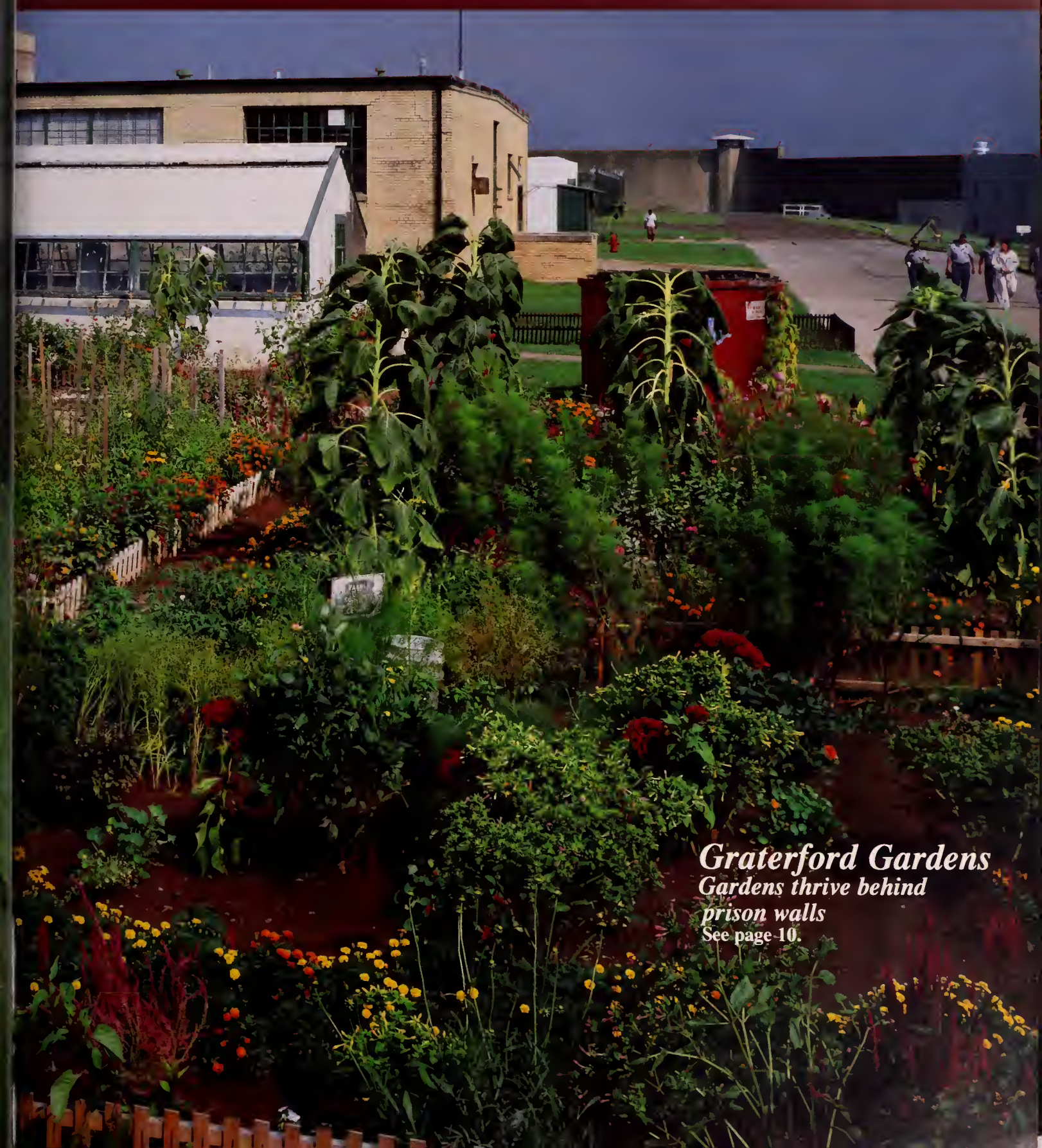
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11.



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Front cover: photo by Bob Ferguson



in this issue

3. Gold Medal Plant Award

Claire Sawyers

11. Graterford Gardens

Dorothy Noble

15. The Garden Goes Over His Head

Tom Gradwell

19. Child-Proofing Your Garden

Kathleen A. Mills

21. Get Serious About Night Blooming Cereus

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22. The Homestead Year (Part II)

Judith Moffett

29. Tropical Influence in a Shade Garden

Anne S. Cunningham

32. F. Gordon Foster: He Can't Keep His Ferns to Himself

Patricia A. Taylor

34. Classified Advertising

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THE PENNSYLVANIA HORTICULTURAL SOCIETY

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the green scene / january 1994



SIX WINNERS OF
THE 1994 PENNSYLVANIA HORTICULTURAL SOCIETY

GOLD MEDAL PLANT AWARD

 by Claire Sawyers

Six winners that emphasize differing qualities that include fragrance, some pest and disease resistance as well as resistance to heat, humidity and drought.

Ilex glabra 'Densa' — Inkberry holly



photo by Larry Albree

Ilex glabra 'Densa' (foreground) at Longwood Gardens in late May.

In 1990 I joined the committee of evaluators who observe, study and stew over woody plants each year to select a handful to receive the annual Pennsylvania Horticultural Society Gold Medal Plant Awards. These plants, committee members believe, merit wider use in the Mid-Atlantic Region because they've been neglected or underutilized considering their virtues.

Gardeners are usually an opinionated lot; and that certainly rings true for the growers, designers and professional horticulturists who serve on this committee (see the box, page 9 for a list of evaluators). Rest assured, passionate convictions based on years of experience stand behind the six plants the group selected for this year's awards; rest assured, these award-winners will perform well in your garden and provide rich beauty.

The Gold Medal Award program, initiated in the 1970s with the first awards being presented in 1988, is one way the Pennsylvania Horticultural Society promotes diversity in garden plantings in the region. Since the program's inception, 42 plants, including this year's winners have received the award. Besides helping gardeners to select plants that perform well, the program encourages the production of these plants by producing and widely circulating a source list of growers (see box on page 9).

Ilex glabra 'Densa' — Inkberry holly

This holly is a workhorse of a plant. Although underutilized now it deserves to become a mainstay in our gardens because of its year-round interest and its broad adaptability. A native species found up and down the east coast, inkberry holly has small, shiny, medium to dark green leaves that give the shrub a fine textured, undemanding presence in compositions. As the cultivar name 'Densa' implies, this selection of inkberry holly stays denser and fuller than others of the species; however, it is not a dwarf. In a decade, 'Densa' grows into a densely branched shrub reaching 6 feet or so. It was selected by Carl Flemer in 1940 from a seed lot he collected from a plant growing on Long Island. Although it became available in the trade in the early 1950s, it still is relatively uncommon.

'Densa' is a dream plant for screening, massing and softening buildings because of

its habit and because it will take full sun, shade, hot dry sites and water-logged sites. And even in demanding sites, pests and diseases don't bother it. At Longwood Gardens a mass of it planted in an island surrounded by asphalt, blocks a view to the business parking lot in front of the conservatories. At the Scott Arboretum, it has become a standard for camouflaging service areas around the campus, and it didn't complain during the dry hot summer months this past summer.

Seasonal interest is not what this plant is about: the tiny flowers can pass unnoticed and the blue ink-colored fruit is subtle and rarely produced on this clone, but boxwoods and yews don't provide seasonal interest either and look at their prominence in our landscapes. *Ilex glabra* 'Densa' is more adaptable than either of those so it deserves the same kind of popularity.

Useful in USDA Zone 5 to Zone 9.

continued



Clethra alnifolia 'Hummingbird' — Summersweet

Clethra alnifolia 'Hummingbird' — Summersweet

What's special about this summersweet is its size. It's low compared to the species, at maturity staying about 2 feet in height. This, combined with its suckering and spreading habit, makes it an ideal candidate to use as a groundcover or in a mass planting.

Summersweet is a shrub much admired for its abundant fragrant flowers that appear in the summer. And although it's deciduous, it offers subtle winter interest from the sprays of tannish seed cases at the end of stems. A native plant, you can bump into summersweet locally in the wet ditches of the New Jersey Pine Barrens or on the banks of Trap Pond in southern Delaware. Its range extends much beyond these neighboring states, south to Florida and north to Maine. While in the wild it grows in wet sites, in cultivation it's adaptable to many sites, sun or shade. At the Scott Arboretum we've planted it in a bed surrounded by paving in soil abused from excessive construction work. There it's thriving, as evidenced by ample sucker growth, handsome clean foliage throughout the growing season, and abundant flowering.

This low-growing compact clone was discovered in Georgia, although its southern origins don't interfere with its performance in this area.

It is useful in USDA Zone 5 to Zone 9.



photo by Larry Albee



Photo by Jim Plyler

Top: Closeup of *Clethra alnifolia* 'Hummingbird' at Scott Arboretum in July. **Bottom:** *Clethra* 'Hummingbird' in full bloom at Chadds Ford.

Cephalotaxus harringtonia 'Prostrata' — Japanese plum yew

photos by Elvin McDonald, courtesy of Brooklyn Botanic Garden



Cephalotaxus harringtonia 'Prostrata' at Brooklyn Botanic Garden in early winter.

Cephalotaxus harringtonia 'Prostrata' — Japanese plum yew

This plant, like the clethra, is excellent as a large scale groundcover but it fills a particularly difficult niche as a needled evergreen that performs well in shade. On top of that it's deer resistant. What other plant possesses this combination of virtues? At maturity it reaches 2½ feet high, spreads over 12 feet wide and resembles a large-leaved yew with dark green needles laying in two lines along the branchlets. Phil Normandy, a fellow evaluator, believes this is a good substitute for *Taxus baccata* 'Repandens' particularly in deer-infested areas.

As with the inkberry holly, don't expect changing seasonal interest from flowers and fruits with this plant: it produces small clusters of flowers that can pass unnoticed and since the flowers produce only male parts, it produces no fruit. As a yew substitute, the lack of fruit could be regarded as a virtue since yew seeds are poisonous.

There's not much to say about diseases and pests with *Cephalotaxus* — it's a low maintenance, no problems kind of plant. Siting is important, however. The dark green color depends on shade; sun causes the foliage to turn yellowish. This plant tolerates wetness better than yews, but in poorly drained sites root rot occurs, so planting sites should also offer reasonably good drainage. This cultivar originated decades ago as a sport of *Cephalotaxus harringtonia* 'Fastigiata' at Hillier's Nursery in England.

Useful in USDA Zone 6 to Zone 9.

continued

*It's deer resistant . . . This is a good substitute for *Taxus baccata* 'Repandens' particularly in deer-infested areas.*



Prunus 'Hally Jolivette'

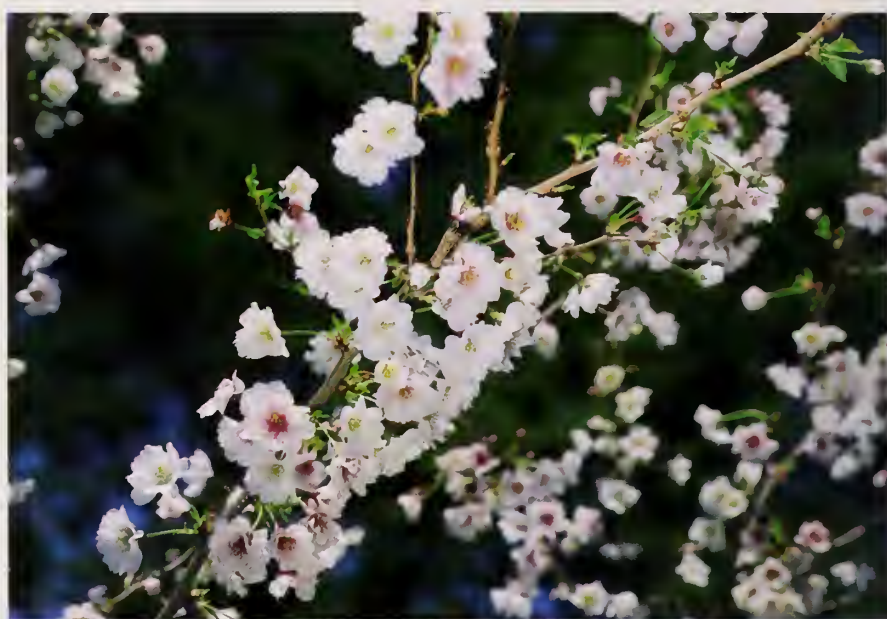
Prunus 'Hally Jolivette'

This flowering cherry is especially appealing because of its small, manageable size, its fine twiggy habit, and its exquisite long-lasting blossoms. At maturity this tree stays under 20 feet with a spread no more than that: a size that lends itself well to small home gardens. Its rounded, densely branched habit becomes a cloud of pale pink double blossoms in April as the buds open over a two- to three-week period and it begins providing satisfaction at an early age. Plants just two years old flower. Besides the intense spring interest, 'Hally Jolivette' offers the handsome bark characteristic of many cherries — a smooth brown bark dotted with whitish wart-like lenticels and in the fall the leaves offer shades of rose and yellow as they drop.

This fine cherry has been around since 1940 so it's high time we fully appreciated its virtues. It was developed in a breeding program by Dr. Karl Sax, formerly of the Arnold Arboretum. It's got a lot of Higan cherry (*P. subhirtella*) blood with some Yoshino cherry (*P. yedoensis*) mixed in.

In the garden this cherry can function as a large shrub as easily as a small tree. Plants may be grown and sold as multi-stemmed affairs, and in the garden grown in this way, *Prunus* 'Hally Jolivette' is effective as a mass or in a shrub border. In the Teaching Garden at the Scott Arboretum, a single-stemmed 'Hally Jolivette' creates the terminus to a perennial border. At 15 feet tall, it seems appropriately blended with the Joe Pye weed and boltonia, and once the perennials are cut back, it provides some winter and early spring structure to the border.

Useful in USDA Zone 5 to Zone 8.



photos by Larry Albrec

Prunus 'Hally Jolivette' at Longwood Gardens in April.

Cladrastis kentukea (*C. lutea*) — Yellowwood

photos by Larry Albee



Cladrastis kentukea at Longwood Gardens in June.

Cladrastis kentukea (*C. lutea*) — Yellowwood

This native tree is worthy of the Gold Medal for many reasons. A favorite of evaluator Tom Dilatush's, for providing "quick shade," it spreads its crown quickly so it takes only a few years before a shady space is created beneath its branches. Ultimately, it may reach 50 feet high with a comparable spread and while it effectively functions as a shade tree for small spaces it provides interest that competes with the best small flowering trees. In mid- to late May, yellowwood blooms producing elegant pendant clusters of fragrant flowers. Individual flowers are about an inch long, the clusters more than one foot. In good years trees look like clouds while in bloom, especially if they're planted in front of a dark background. (I say in "good" years because this tree seems to bloom more heavily in alternating years, although most of the evaluators believe that even if it never bloomed it still deserves to be planted much more widely.) Its smooth light grey bark is admired by many and its distinct compound leaves turn clear gold in the autumn and are accompanied by flat seed pods, thus making this tree arguably one that provides interest in all seasons.

It does all this without making special demands; it's pest and disease resistant. Give it a sunny spot and a well-drained loam or moist, sandy soil and you won't be disappointed. Although it's said to tolerate periods of excessive drought, Phil Normandy, curator of Brookside Gardens, advises that it will look its best if kept well watered. Avoid pruning in early spring because the sap flows excessively from cuts made then, which may weaken the tree.

The brittle yellowwoods do lose branches from time to time, and bark injuries can lead to rot, but overall evaluators regard the tree as a long-lived "almost indestructible" tree. Richard Lighty, director of Mt. Cuba Center for the Study of Piedmont Flora, summarized his thoughts about this winner when he asked: "How could any plant this attractive and known to gardeners since colonial days have missed becoming popular — even common?"

Useful in USDA Zone 4 to Zone 8.

continued



Abies nordmanniana — Nordmann fir

Abies nordmanniana — Nordmann fir

Most conifers don't dramatically change during the year, and I think that's one reason they're slighted; they don't give us a flowering or fruiting event that causes us to pause and celebrate. They provide form and foliage all year so we take them for granted, but the constancy of conifers is their virtue. In the realm of conifers, *Abies nordmanniana* is among the handsomest with its rich dark green foliage and gracefully tiered branches, and among firs, this is one of the best adapted to the Delaware Valley. It tolerates the heat, humidity and drought. Paul Meyer, director of the Morris Arboretum and experienced plant explorer, says you might expect this kind of tolerance from a plant that's native to the mountains of Turkey.

Nordmann fir is ideally suited as a screening plant or in a background planting. They can be planted close together, say on 15 foot centers, because of their upright and narrow profiles. In time it gets 50 feet tall forming a neat cone no more than 20-25 feet wide — a size that fits many sites. It grows fairly fast as a young plant, although it takes several years for a seedling to build a good root system before it's capable of gaining much height or bulk, according to nurseryman Tom Dilatush. So to the consumer, young plants may seem expensive compared to other conifers. Nordmann firs are easy to establish; they transplant easily even as bare root seedlings.

This fir is generally a healthy, pest- and disease-free tree although it can be affected by scale and woolly adelgids. Bill Thomas, president of the American Conifer Society, says neither are serious pests and spraying is rarely needed, however.

Useful in USDA Zone 4 to Zone 7.



Claire Sawyers is director of Scott Arboretum in Swarthmore, Pa.



photo by Larry Albee

Abies nordmanniana at Longwood Gardens.

Rest assured, passionate convictions based on years of experience stand behind the six plants the group selected for this year's awards.



Gold Medal Plant Award Winners 1989 through 1993

<i>Acer griseum</i>	<i>Deutzia gracilis</i> 'Nikko'	<i>Malus</i> 'Jewelberry'
<i>Betula nigra</i> 'Heritage'	<i>Fothergilla gardenii</i> 'Blue Mist'	<i>Picea orientalis</i>
<i>Callicarpa dichotoma</i>	<i>Hamamelis</i> x <i>intermedia</i> 'Diane'	<i>Sciadopitys verticillata</i>
<i>Clematis viticella</i> 'Betty Corning'	<i>Hibiscus syriacus</i> 'Diana'	<i>Stewartia pseudocamellia</i> var. <i>koreana</i>
<i>Cornus</i> 'Rutban' Aurora™	<i>Hydrangea macrophylla</i> 'Blue Billow'	<i>Viburnum dilatatum</i> 'Erie'
<i>Cornus</i> 'Rutlan' Ruth Ellen™	<i>Hydrangea quercifolia</i> 'Snow Queen'	<i>Viburnum nudum</i> 'Winterthur'
<i>Cornus sericea</i> 'Silver and Gold'	<i>Ilex</i> x 'Harvest Red'	<i>Viburnum plicatum</i> f. <i>tomentosum</i>
<i>Crataegus viridis</i> 'Winter King'	<i>Itea virginica</i> 'Henry's Garnet'	'Shasta'
<i>Cryptomeria japonica</i> 'Yoshino'	<i>Magnolia grandiflora</i> 'Edith Bogue'	<i>Viburnum</i> 'Mohawk'
<i>Daphne caucasica</i>	<i>Magnolia</i> x 'Galaxy'	<i>Viburnum</i> x 'Eskimo'
	<i>Malus</i> 'Donald Wyman'	

How to Enter a Plant for The Pennsylvania Horticultural Society Gold Medal Plant Award

Let us know about exceptional plants that might merit the PHS Gold Medal Plant Award. To obtain entry forms call PHS at (215) 625-8250.

It's easy!

- Make submissions by December 1st.
- Include three to five slides of the plant.

List a minimum of three landscape-size plants, accessible to evaluators in a botanical garden, arboretum or nursery located within 150 miles of Philadelphia (the area from Washington, D.C. to New York City).

A program of propagation and distribution should be underway. This enables growers, retailers and mail order sources to obtain stock for distribution.

Where To Buy Gold Medal Plants

Each year we compile an extensive listing of retail, mail-order and wholesale sources for Gold Medal plants. If you cannot find the winners at your local garden center, we would be delighted to mail you and/or the garden center a source list. Write to (enclosed a stamped, self-addressed envelope): Gold Medal Plant Award, The Pennsylvania Horticultural Society, 325 Walnut Street, Philadelphia, PA 19106-2777.

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Pennsylvania Horticultural
Society

Staff Coordinator
Kathleen A. Mills



Nurtured by diverse prison groups, this once-dreary courtyard now sparkles with vegetation. The Family Resource Center garden in the foreground supplies pumpkins to prisoners' visiting children. Just behind, two men study the Holy Name Society plot. Along the walkway where a fellow inmate picks a flower for his companion in the wheelchair, the Barber Shop Association and the NAACP gardens blossom. Directly across, bordered by the white fence, the Ahmaddiyah plot bursts with bloom. Barely perceptible markings — 2:30, 3, and so on — are unique to the picket fences of one garden in the rear. Adjusted periodically, of course, these tell the time of day when the wall's shadow cast by the sun reaches that point.

Graterford Gardens

Not yet mid-morning, and the August heat and humidity already feel oppressive.

I jump a bit as Nancy Bosold shouts, "Bob, watch your elbow." A three-inch-thick steel door slams with the force and fury of a freight train, separating my party. By the time my breathing returns to normal, I'm in the next group the guard summons. We proceed through the security checks of the State Correctional Institution at Graterford, a maximum-security prison, 25 miles northwest of Philadelphia. I'm one of a team of four people here to judge the prison horticultural program's gardens.

I stay close to correctional officer James Salvi as he escorts us through the corridor past the staff shoe shine stand and dining room, a laundry, dry cleaning plant, weaving room, tailoring and sundry other shops, including a barber shop.

We can't escape the noise. The high concrete and metal walls surrounding the 4,200 men who exist in this depression-era built fortress intensify sounds worsened by overcrowding. Finally, drawing from his collection a large key of dungeon-like

by Dorothy Noble

Garden judges leap 30-ft. prison walls to capture the inescapable beauty within.

antiquity, Officer Salvi unlocks the courtyard door, and we are released to the outside.

It's as if he had unlocked another world. Suddenly there's beauty, color, harmony and an aura of tranquility. The contrast could hardly be more vivid. Having been in meetings where Penn State master gardener Sandy Schultz appealed for donations of seeds, plants, and other materials, I half expected a mishmash of uncoordinated plants stuck in ill-suited places. Not here!

Nothing looks amateurish. The gardens, designed by individuals convicted of arson, armed robbery, burglary, weapons possession, rape and murder

could as easily have been landscaped by the best of the City Gardens Contest winners we had judged a week earlier.

A heart and soul

Wandering through, we behold gardens with heart and soul, brought to life with creativity, imagination, and definitely an abundance of love. Marigolds in the Chapel Ushers' garden are pruned to spell J-E-S-U-S. The Seventh Day Adventists' flowers say L-O-V-E. The Veterans of Graterford Incarcerated and the Vietnam Veterans Association dedicated their plots to the Vietnam War POW-MIAs.

Close observation reveals outstanding maintenance. We are especially impressed when the overall inside coordinator, Matthew Epps, tells us that 95% of his fellow prisoners had never gardened before.

Shades of blue, yellow, red, and pink ageratum, celosia, cleome, cockscomb, coleus, dahlia, marigolds, morning glories,

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photos by Bob Ferguson



Left: "The most peace I've had in twenty years," muses Gervin Deaton, Lifers coordinator. **Right:** The exuberant Frankie Lee (in yellow tee shirt) leads his Jaycees group, while on the left some members of Post 466 of the Vietnam Veterans of America contemplate their blue ribbon handiwork. The white 55-gallon drum cleverly conceals a manhole cover. When in full bloom, the white petunias on top made it look like a 'giant snowcone.' Post 466, one of only three prison posts in the state, last year was named the country's top Vietnam veterans post.

Turning the soil with a stick, and using a plastic spoon to dig, he sowed a few seeds gleaned from volunteers.

Gardening in Prison

A slow escape from the ground up

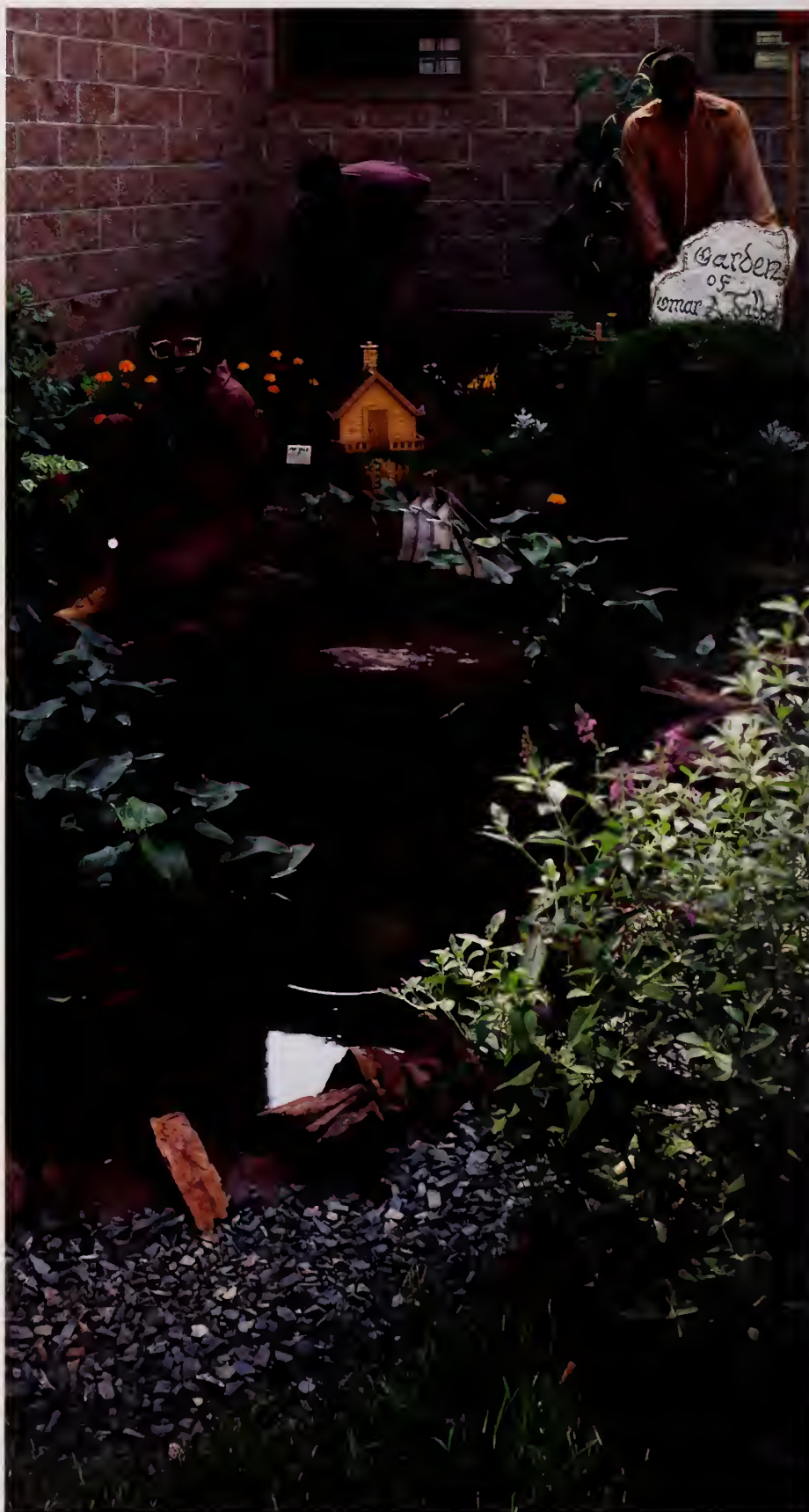
Graterford was not always this bright. Eight years ago, while looking out the chapel window at nothing but the desolate landscape each day, Matt Epps envisioned plants blossoming. His request to plant a garden was denied.

Not one to give up hope, he saved the pit from a kitchen peach and planted it by E block. Epps began clearing the area of its depressing debris. Turning the soil with a stick, and using a plastic spoon to dig, he sowed a few seeds gleaned from volunteers. Others insisted that nothing would grow on that poor dumping ground, but at that time Epps thought even dandelions would be beautiful, and proved the pessimists wrong.

In time Epps was allowed to use shovels and other tools from the maintenance department — a laborious procedure that included written permission, a guard or chaplain escort, and ultimately securing the equipment within the chapel. Understandably, prison rules complicate gardening. For example, it was “heartbreaking,” Epps recalls, to discover his coveted compost pile was hauled away as common trash. However, a year later Deputy Stachalek gave Epps a gardening book. In 1988, a sunflower seedhead, entered in the Harvest Show by volunteers, won Epps a blue ribbon.

In 1990, Epps, assisted by criminologist Dr. Julia Hall of Drexel University, formally proposed a horticulture program for Graterford; his proposal was accepted. This program, which emphasizes job skills training, is supported by volunteers. Many church and senior groups, along with some of the prison guards, continue to contribute. Penn State Cooperative Extension of Montgomery County, with its master gardener volunteers, conducts

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photos by Bob Ferguson

The highlight of the grand champion Masjid Wallace D. Muhammed plot, this water garden exemplifies the spirit of the Graterford gardeners. The sign in back honors Omar A. Jabbar (now paroled), who dug the fish pond.



Running the length of the greenhouse, the colorful summer flowers framing Green Acres conceal a real treat. Open the flower-bedecked white gate, duck under the morning glory arbor, and savor delectable-looking cantaloupes, eggplants, lettuces, peppers, tomatoes, and more thriving on both sides.

petunias, roses, salvia, snapdragons, sunflowers, and zinnias combine with beans, broccoli, cabbage, eggplants, peppers, pumpkins, squash, tomatoes, and herbs to produce pleasing palettes. Charming picket fences, decorative signs, and trellises tailor-made in the carpentry shop enhance the picture. The effectiveness of scale, balance, and color coordination of most of the 34 plots amazes us, considering the

Close observation reveals outstanding maintenance. We are especially impressed when the overall inside coordinator, Matthew Epps, tells us that 95% of his fellow prisoners had never gardened before.

prisoners worked with donated items. Creativity and style compensate for any lack of materials.

Examples of knowledgeable horticultural practice catch our attention. We spend so much time discovering, admiring, and discussing that Penn State Extension Agent Bosold splits the judges into two teams. My partner, Mimi Colavita, Philadelphia County Urban Garden Advisor, spies the tiny pond made to catch the drips from a staff office air conditioner above. Raised beds are common; some sport sophisticated drainage ditches. The noticeably high-yielding tomato stake-trellis system also impresses Colavita. We learn that the Jewish Congregation Group at Graterford modeled it after the four-plant, one-stake method developed on the kibbutz in Israel.

A spectacular archway overflowing with

heavenly blue morning glories heralds the Green Acres plot. Cantaloupes, their substantial weight supported by slings, climb trellises amidst tomatoes and hot peppers galore. Hanging baskets of flowers fill the air with fragrance. Tall multi-colored zinnias bordered by precision brickwork outline the lush vegetables.

Justifiably proud, the beaming inmates try to sneak peeks on our scoresheets. Most needn't have worried; any negative comments primarily reflected inherent limitations (for example, fungicides needed to prevent mildew on some plants were unavailable).

The gorgeous Masjid Wallace D. Muhammed garden brightens an entire courtyard. Beautifully maintained and impeccably mulched flowers frame all the walls and guide us toward the water garden. On both sides of the arched entrance to this delight, two boulders painstakingly lifted by two strong men from the clayey soil invite one to come in and linger. From these surprisingly comfortable seats, one can contemplate the peaceful waterfall. Incorporating a surplus sump pump for water circulation, the pond becomes complete with aquatic plants, goldfish, and a replica of a sailboat. No wonder it attracted its resident frogs; unhappily the feral cat that lurks around the prison beheaded most of them. Artfully constructed diminutive houses, set among the garden's grassy hills and valleys, charm us by their fancy trims and pressed flower accents. The decorated rock in the center honors Omar A. Jabbar, now paroled, who dug the fishpond. Later, we were not surprised to learn that the coordinator of this garden knew it would

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Prison groups previously at each other's throats now work together. There has been not one single incident of trouble in the gardens.

horticulture classes.

The volunteer spirit drives the program inside as well. The men in the horticulture program garden on their own time — participants are not relieved of responsibility for their regularly assigned jobs. Response has been overwhelming. Since the classes began last year, the number of participants increased from less than 40 to about 240. The *esprit de corps* is even more gratifying. Epps reports, "Prison groups previously at each other's throats now work together. There has been not one single incident of trouble in the gardens. Former tough guys now talk about zinnias. People miss lunch just to come look." And Graterford's senior citizens in particular benefit from the outdoor exercise.

Epps has gone on to win blue or red ribbons for amaranth, celosia, kochia, and pumpkins in subsequent Pennsylvania Horticultural Society Harvest Shows (a friend enters them for him). His flower arrangement captured the top prize in this year's Montgomery County 4-H Fair.

These gardens also provide flowers that Epps arranges for the superintendent's desk daily, prison events, and special occasions for inmates' families. The opportunity to send flowers for a family bereavement has a particularly significant positive impact.

Contrary to many expert prognostications, and without a known pollinator, E block's peach tree bore fruit just four years after planting.

The Graterford residents speak eagerly of next season — some have elaborate plans for their plots. If the badly needed greenhouse repairs materialize, greenhouse training will add a welcome dimension to the program. (At this writing, an anonymous donor has contributed about a third of the cost of repairing the roof and heating system.)



In this blue ribbon garden, the Veterans of Graterford Incarcerated express their tribute to fellow POW-MIAs with shades of yellow, pink, and red flowers.

Garden Clubs at Graterford Prison

Prison, it is said, robs one of identity. Graterford garden groups offer natural channels for expression and reinforcement of ethnic background, creed, vocation, values. These groups gardened in 1993:

- Academic Study Group
- Ahmaddiyah
- Barber Shop Association
- The Boxing Association
- Briar Patch
- Chapel Ushers
- Concerned Senior Citizens/Gray Panthers
- Dar-U-Islam
- Family Resource Center
- Green Acres
- Holy Name Society
- LACEO (Latin American Cultural Exchange Organization)
- Latin Agriculture
- Lifers
- Jaycees
- Jericho Project
- Jewish Congregation at Graterford
- Masjid Wallace D. Muhammed
- Montgomery County Task Force
- The Music and Activities Department
- NAACP
- Nation of Islam
- New Discovery
- Paradise Island
- Paraprofessional Law Clinic
- Prison Literacy Project
- Threshold
- Seventh Day Adventists
- St. Dismas Mission
- Veterans of Graterford Incarcerated
- Vietnam Veterans Association

●
Writer/researcher and horticulture experimenter Dorothy Noble judged preliminary and finalists in PHS's City Gardens Contest the past two years as well as judging the Graterford Gardens this season.

become the grand champion.

We select Green Acres as the second highest winner, and award 15 more blue ribbons, 10 red ribbons, and seven honorable mentions.

The rewards

"Everybody has won here today," observed Graterford superintendent Donald T. Vaughn as he presented the awards. Vaughn related that in the gardens, he now notices persons working together whom he had previously seen only for disciplinary problems. When Vaughn announced the Masjid Wallace D. Muhammed garden grand champion, coordinator Ameen A. Jabbar selflessly gave the plaque to Officer Salvi in appreciation of his help toward all the gardens.

Vaughn expressed optimism for next year's project. Said a prisoner, "Not if I get my appeal."

According to the coordinator of both veterans' gardens, this contest was a big motivator. And winning must be especially gratifying in the prison environment. One 55-year-old veteran got teary when informed of his group's blue ribbon. He explained he had never won anything before in his life. The coordinator observed another veteran who "... came out of his shell in the gardens. He had never talked to anybody, just sat around. But after his garden started, he worked out here in all kinds of weather and became a different person."

Others echoed the striking benefits of the garden project. "Even those not working in the gardens can come out here and find

peace," one appreciative prisoner reported.

Frankie Lee, the Jaycees coordinator, exclaimed, "We only got a red ribbon, but that doesn't matter. This project is helpful, something constructive to work on. And we enjoyed the fruits of our labor. These guys worked so hard, they got blisters. People think those incarcerated are animals, no good — that's not true. We care about nature too. This is a wonderful project, a humanitarian mission."

One Vietnam veteran recently transferred from another facility to Graterford for its post traumatic stress disorder treatment, described his work in the Post 466 plot: "This is the first time I've seen anything like this for eight years. It takes a lot of stress out."

"Valium," summed up another inmate.

And Tony Matos added, "You feel free for a while. It's like a little escape."

Obviously, many hours of volunteer effort and donations, plus an enlightened management team at Graterford, make the gardens possible. And Matt Epps' perseverance, organizational ability, and natural horticultural inclinations certainly inspire gardening excellence.

The austere, confined, desolate, and seemingly hopeless prison setting clearly magnifies the joy that horticulture brings. Thomas D. Stachalek, deputy superintendent for treatment, understands. Stachalek, who calls working in his own backyard therapy, says, "... getting someone off the cellblock and giving him a chance to help grow something creates just as profound an oasis as church."

The Garden Goes Over His Head

 by Tom Gradwell

The author turns a peculiarly shaped and limited space into an award-winning garden that cheers both him and his neighbors. Gradwell sets the garden atop a six-foot concrete-block wall, and he plants, waters and harvests from a ladder.

photo by Ann L. Reed



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Looking down on "V"-shaped garden set atop 6 ft. wall. Dark center space is yard. At the top of the photo, a 20-inch-wide box contains dahlias and morning glories that have covered a fan trellis and continue up the light pole. Plants of this size in a small container require frequent watering.

continued



photo by Ann L. Reed

One thing that all gardeners know about is problems. When I bought and planted my first cosmos and cantaloupes in the second grade the problem was patience. Since moving into my house in South Philadelphia the problem has been concrete.

It's not that I have concrete rather than soil in my backyard that makes it unusual. It's the yard's size and shape. I am at an odd angled intersection leaving me with a pie-shaped house and yard. Although the yard extends back about 22 feet, its width quickly narrows from just five and one-half feet down to only 20 inches. A six-foot-high cinder-block wall around the yard gives it the aspect of a long, narrow canyon, or maybe a cell at the old Eastern State Penitentiary.

How could I grow anything here? Even if I removed the concrete and put in new soil it would be like trying to farm at the bottom of a well. The ground receives less than an hour of sunlight at the height of summer.

Container gardening sprang to mind when I was throwing away a spring water bottle. I cut the tops off three bottles and poked drainage holes in the bottom. Then I went the potting soil and marigold seeds. Patience was no longer a problem, and before I knew it the marigolds were blooming and growing rapidly. Then when I went away for a weekend the next problem appeared: water.

Because there are no buildings to the east

By mid-July I had Scarlet O'Hara tapping at the bathroom window every morning.

and west of the yard, containers sitting atop the wall receive full sun from nearly dawn to dusk. In summer heat a growing plant in full sun quickly uses all of the water in a container, especially when you overplant containers the way I always do. Over the next few summers I tried various things to overcome the water problem. Plugging up the drainage hole drowned the plants. Modifying the soil mix to make it hold more water didn't help. Other plants fared no better than the marigolds. Larger containers were difficult to lift and balance on the narrow wall. Besides, I overplanted them, too.

By the third or fourth year there was a collection of twenty-odd containers on the 8-inch-wide wall ranging from gallon bottles to seven-gallon buckets. The largest containers held tomatoes, while the others had marigolds, snapdragons, begonias, petunias and alyssum. These last two showed me how to expand on the color display from my little garden by including trailing plants as well as upright ones. Cascading blossoms now camouflaged the uneven row of unattractive plastic buckets.

I had containers only on the inner wall between my neighbor's yard and mine. I

discovered that containers on the outer sidewalk wall would vanish mysteriously in the moonlight. Then, in 1989, I saw some small redwood planter boxes in a garden center that I was able to fasten to the outer wall. My mini-garden now surrounded the yard.

The combination of overplanting and all-day sun still occasionally produced parched wilted plants. Soaking the entire garden twice a day was becoming a chore. The time had come to try modern garden technology — porous plastic soaker hose.

I connected sections of soaker hose with short pieces of PVC pipe so I wouldn't be needlessly watering the cinder blocks. The hose was attached to an automatic timer, so that I could break my chains to the garden. Even after fiddling and tinkering with the arrangement all summer long, I was not happy with the result. The varying size and height of the containers always left some drowning, while others received almost no water at all. The wooden boxes, however, were a great success. They looked so much more attractive than gray, brown, black, red, white, and orange buckets and bottles.

In 1990 my brother-in-law, Robert Luciani, helped me to design and construct a series of heavy wooden boxes that fit perfectly on the wall. They provided enough depth for the tomatoes and could be bolted onto the wall for security. I installed 36 feet of boxes that were 12 inches high, 10 inches wide and two or three feet long. I



Far left: The author's outer wall along the sidewalk overflows with petunias, marigolds, allysum, nicotianas, celosias, scabiosas, zinnias, begonias, and balsams. They provide an exciting riot of colors as each shows off during a different part of the season. Frequent deadheading and pruning is required to keep a neat appearance. Twine stretched from the garden to the roof allows Scarlett O'Hara morning glories expand the garden and add color to a drab wall. They sometimes reach over and decorate the awning. (The graffiti on the wall may have come from unknown local garden 'judges.') **Left:** Cannas grown in containers six feet off the ground have a towering impact. Growing near them on either side are tomatoes, cucumbers, amaryllis, lemon balm, morning glories, marigolds and petunias. **Above:** Tom Gradwell on ladder to maintain plants.

filled them with a mix of topsoil, peat moss, several bags of manure, and 50 pounds of sand. That year my small container garden blossomed into an inner city farm. It also brought the first of four second place awards in the Pennsylvania Horticultural Society's City Gardens contest.

Along with the flowers that I have already mentioned I planted zinnias, nicotianas, carnations, hostas, caladiums, balsam, begonias, gladiolus, dahlias, scabiosa, nasturtiums, impatiens, sunflowers and Burpee's giant white asters. The asters were spectacular. In the box across the 20-inch-wide far end of the garden I planted dwarf cannas. To the tomatoes I added celery, cauliflower, broccoli, bell and cayenne peppers, summer squash and zucchini, strawberries, ruby chard and pole beans.

The ruby chard is an excellent vegetable for small gardens. It grows quickly and produces an abundance of delicious greens and celery like red stalks until a hard frost. The shiny dark green leaves with bright red stalks and veins are an attractive addition to the garden. Pole beans were a different matter; planted six feet off the ground they are difficult to pick.

Of all the flowers allysum are my favorite. They are covered with hundreds, maybe thousands, of tiny white blossoms until mid-November. I enjoy walking through the yard with this wonderful display of carpet of snow only inches from my nose.

photo by Mary Coppens

The delightful scent instantly carries me away from the city to some secret country garden.

From the awning over my bathroom window I dropped down strings to the two boxes that contain morning glories and moon flowers. By mid-July I had Scarlet O'Hara tapping at the bathroom window every morning. A wooden fan trellis in the box with the cannas also supports morning glories, making both ends of the garden glorious in the morning.

Every box is filled to overflowing. In a container 24 x 10 x 12 inches I might grow four petunias, two balsam, two vinca vines (which bloomed this spring for the first time), three marigolds, three snapdragons and lots of alyssum. Another box, 36 inches long, has four tomato plants — Roma, Cherry, and two Early Girls. This intensive garden requires lots of fertilizer and even more water.

I felt enslaved. I couldn't go away for a short weekend because the soaker hose arrangement still didn't work right and parts of the garden would dry out. So, the soaker hose gave way to a Gardena drip irrigation system, which took much longer to plan and set up than the soaker hose, and the results were worth the effort. It freed me from garden bondage. Now I can take off a day or two to ride roller coasters without my garden dying of loneliness.

I plant everything so close together that I am forever pruning and clipping to keep each plant from interfering with its neighbors. I sometimes think my 'hanging gardens of South Philadelphia' may be the only garden to be pruned and weeded from a ladder. My two rabbits enjoy browsing

through the clippings, but it was now far beyond their appetite. The amount of garden waste was growing enormously. My long interest in organic gardening took hold, and I started composting.

According to what I had been reading, with the right techniques garden waste could be composted in as little as two weeks with no objectionable compost odor. After searching for a suitable container I chose a Rubbermaid clothes hamper. It was sturdy, inexpensive, had numerous ventilation holes, and would fit in my yard. I began layering the garden clippings, manually chopped into small pieces, and the contents of my rabbits' litter box into the hamper. With some practice, and only a few early, smelly mistakes, I can now produce a batch of compost in about three weeks. An electric chipper shredder has made the massive end of season cleanup work a lot easier.

In 1991 I wanted to expand the garden but there was no room left on top of the wall. So, I attached a narrow shelf along the wall to hold a few more wooden boxes. In these new boxes I planted herbs: chives, dill, fennel, oregano, marjoram, basil, chervil. And, of course, parsley, sage, rosemary and thyme.

Aphids are the only insects that still give me more than occasional trouble. By mid-summer they are all over the strawberries, nasturtiums and nicotiana. Importing lady bugs didn't help, and insecticidal soap lasts only a day or so. Does anyone have a sure cure for aphids? (No, I'd rather not spray poison in my garden, thank you.)

The only problem left, other than how to eat all the tomatoes, is wind. I guess it's

because the garden is six feet in the air. Every year, two or three storms blow through and do a good bit of damage. The balsam are always hit hard, but they have usually self-sown so prolifically that there are always more to take their place.

Last year one of the boxes blew off the wall. If you can imagine how heavy a three-foot-long by one-foot-high box full of wet soil and four large tomato plants weigh, you'll have some idea how strong that wind must have been. Fortunately, the box was well constructed and did not break. My neighbor and I had to let it dry out for a day before we could lift it back up on the wall. Perhaps this year I'll finally find the energy to bolt the boxes to the wall as I had planned when I built them.

There was a time when I thought I couldn't grow anything in my concrete jungle. That was a challenge I couldn't resist. Now I can pick berries for morning cereal, vegetables for dinner and flowers for the table. I enjoy sitting out in my green canyon on a hot summer evening admiring the jungle that I've grown on concrete. The challenges seem to have all been met. Now if I could only find room for just this one more...

Tom Gradwell, a dedicated lifelong urban gardener, is now eyeing his roof to see if he can add to his garden acreage. When not at his job as a technical trainer in the computer division of an insurance company, he's either in his garden, traveling, or riding a roller coaster somewhere. (Tom is a member of American Coaster Enthusiasts.)

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IN THE GARDEN

Child-Proofing Your Garden

by Kathleen A. Mills

When I told a colleague that I was writing about child-proofing the garden I was surprised at his response. "A great idea," he said, "I'm always looking for ways to keep the neighborhood kids out of my yard!" I could see visions of barberry (*Berberis* spp.) and hardy-orange (*Poncirus trifoliata*) dancing in his head. Well that wasn't quite what I had in mind.

Nothing will inspire you to child-proof your garden like your very own dynamo. I study our 14-month-old daughter Sarah as she explores the outdoors in our back yard and quickly realize that horticultural perfection and pristine flower beds are a thing of the past. Sacrificed to her expeditions are plucked flower heads, trampled perennials and picked-too-soon tomatoes. As each goes directly into her mouth, the importance of a safe garden becomes, for me, an instant priority. I am solaced that plants are vigorous and can withstand some abuse and that there will be next season for tomatoes and lessons in ripeness. But I look at stakes, and hose guides and low fence latches and realize there is work to be done.

An inquisitive, playful nature is part of childhood. A garden should nurture, not stifle these qualities. Organic gardening practices protect children from exposure to chemicals and serve as a positive example of taking good care of our earth. Turf areas where babies crawl and children play are of special importance. Aeration and liming are your two best tools for great turf and healthy children. (See *Green Scene*, "Here's to A Healthier Lawn," November 1989, p. 33.)

A garden pool or pond is a serious hazard for youngsters. Children should never be left unattended if you have a pool or pond in your yard. Stakes are another

hazard. The gardener in us discretely hides stakes. Hidden stakes are tripping hazards. Use metal blossom holders or peony rings; these are less likely to poke and hurt kids than the unprotected ends of bamboo or wooden stakes.

The garden is a great place to teach lessons of respect for wildlife and growing things. A no picking policy is best for youngsters until the age of three or four when they can differentiate between things that are OK to pick and things that are not. Older children can be taught which things are OK to eat from the garden and which things are not. Until age five or six a no eating policy is best. Some garden plants are edible and others are poisonous.

Common Poisonous Garden Plants*

Azalea/	Foxglove	Oleander
Rhododendron	Lantana	Rhubarb
Caladium	Lily-of-the-valley	Tansy
Daphne	Monkshood	Yew

Children love gardens that have secret places to hide, trees to climb and plenty of things to run around. They enjoy the comfort of a backyard best, so keep your prized possessions out front. Swing sets are great fun, but play sets that can be climbed on and run around provide many more hours of enjoyment. A three-inch base of mulch provides a soft landing pad and when the kids are too old to swing, can be turned into the soil for a great start on a new garden area.

Gardening with your children teaches respect and responsibility. Nothing delights children more than the magic of spring — watching plants grow. Unless you can stand a weed patch, young children are happiest gardening right along-side a favorite adult. Older children are able to handle their own plot and enjoy choosing which plants to grow.

Gardens should be fun, peaceful places that nurture our spirits and our families. Take a moment to look at your garden with a child's eye. My plants are flopping and my hose guides are gone, but when Sarah sets out on her next expedition I can relax and when she puts a blade of grass in her mouth, I don't have to do the 100-yard dash to fish it out!

*A partial listing from *Human Poisoning From Native and Cultivated Plants*, 2nd edition, by James W. Hardin & Jay M. Arena, M.D., Duke University Press, North Carolina, 1974.

Kathleen A. Mills, a horticulturist, works at the Pennsylvania Horticultural Society.





(Top) Tall planting of night blooming cereus to right (not in bloom) is shown at the Brosius's greenhouse in front of the swimming pool. The buds of the *Hylocereus undatus*, called the Honolulu Queen, initially 1/4 in. (left), swell over a three-week period to 3 in. long and 1 1/2 in. in diameter, before opening into a 5- to 6-in. flower (at right). These blossoms are actually pure white; the golden glow results from flood lighting when photographed.



D-J and Howard Brosius say a thousand blooms have come from the initial gift of a single leaf. The scent is so strong when the plants are in bloom that it wafts from the greenhouse to the driveway at the front entrance.

Get Serious About Night Blooming Cereus

by D-J and Howard Brosius

While we've been avid gardeners for nearly 25 years, rarely has our interest in a plant been as great as our fascination with night blooming cereus (*Hylocereus undatus*). Though the plant itself is somewhat gangly, the fragrance and the beauty of its many blossoms are captivating. We have nurtured our own night blooming cereus for about five years now, and continue to be lured by its beauty and peculiarities.

We were given our first plant by an acquaintance who presented us with a 6-inch pot holding a leaf from his prized plant.

The leaf, which was just beginning to root, remained in its clay pot in our greenhouse. After about 12 weeks the leaf began to send out shoots. We never let the plant dry out completely before watering. When watering we fed the plant a weak solution of commercial blossom-boosting fertilizer, about a half teaspoon per two gallons of water. Within a short period the plant began to grow quite rapidly.

We then repotted the two-foot plant into a 10-inch clay pot, using a mixture of vermiculite, peat moss, and soil. This climbing plant, which grows naturally in jungle areas, can attach itself to rocks, trees, and other plants with its aerial roots. Within a year, our night blooming cereus had climbed 10 feet to the top of the greenhouse. We used a reinforcement rod to stake the plant, and tied its rather unruly foliage to our greenhouse roof with florist's wire.

In July 1992, the tornado that devastated the Morris Arboretum of the University of Pennsylvania swept through our property, uprooting and damaging about half of our large old trees. In just a few minutes, our garden canopy dramatically changed. One of the trees snapped off at about 20 feet,

landing on our greenhouse. About a week later after the debris from the shattered greenhouse had been removed, we discovered the *Hylocereus* in the swimming pool within the greenhouse enclosure. The 10-inch pot was broken and the separated root mass was lying on the bottom of the pool. We cut off the foliage at the top of the plant and repotted it, this time in a 12-inch pot and placed it in the woods for a hopeful, but doubtful recuperation.

The spicy fragrance produced from the flower is so pungent that it fills not only our greenhouse, but the connecting house as well, and has been noticed from the outside.

In a few months, the property was back in order and our greenhouse had been rebuilt. In October, when I retrieved the night blooming cereus from the woods, we found that it had sent up four new shoots, where originally there had been only one. The plant was lovingly restored to its former spot in the finished greenhouse. It continues to thrive, blooming two or three times a year.

Watching the flower bud develop is as interesting as the open flower. The blooming season begins in July and can last through the end of October. The flowers are funnel-shaped, with pure white petals up to five inches long. The process of setting buds begins with tiny eruptions from a leaf notch. The buds grow noticeably plumper each day, the sepals that tightly wrap the developing flower change from green to a yellowish-brown color. When it begins to unfurl, tentacles surround

the opening flower. In the evening when the flower opens, dozens of thread-like stamens dotted with a golden pollen appear in the center of a magnificent bloom that measures five inches deep and eight inches across. *Hylocereus* is pollinated by bats in its natural habitat. If fertilized, the flowers produce an edible fruit. The spicy fragrance produced from the flower is so pungent that it fills not only our greenhouse, but the connecting house as well, and has been noticed from the outside. At dawn the petals close and the bloom is finished.

Each flower blooms only once, but it is not unusual for a plant to have as many as 15-20 blooms in an evening. This past June, after a dormant period of six months, our night blooming cereus produced so many buds that it had more than 50 blooms on three consecutive nights. Occasionally we have removed flowers with stems at night and placed them in a large bowl of ice water in the refrigerator. They make a beautiful and interesting conversation piece at the next day's luncheon.

Hylocereus is a member of the cactus family, which accounts for the somewhat unusual way its leaves turn into stems. Like our own plant, it can be easily propagated by rooting leaf cuttings. With little effort, this plant becomes a spectacular addition to any greenhouse or large window area.

D-J Brosius is an interior designer and active participant on the Pennsylvania Horticultural Society's Member's Committee.

Howard is an investment advisor and recently completed a six-year term as chair of the Pennsylvania Horticultural Society Finance Committee.

Together they started the Society's annual Azalea Garden Party. Both are avid gardeners in their three acres of wildflowers, container gardens and greenhouse.

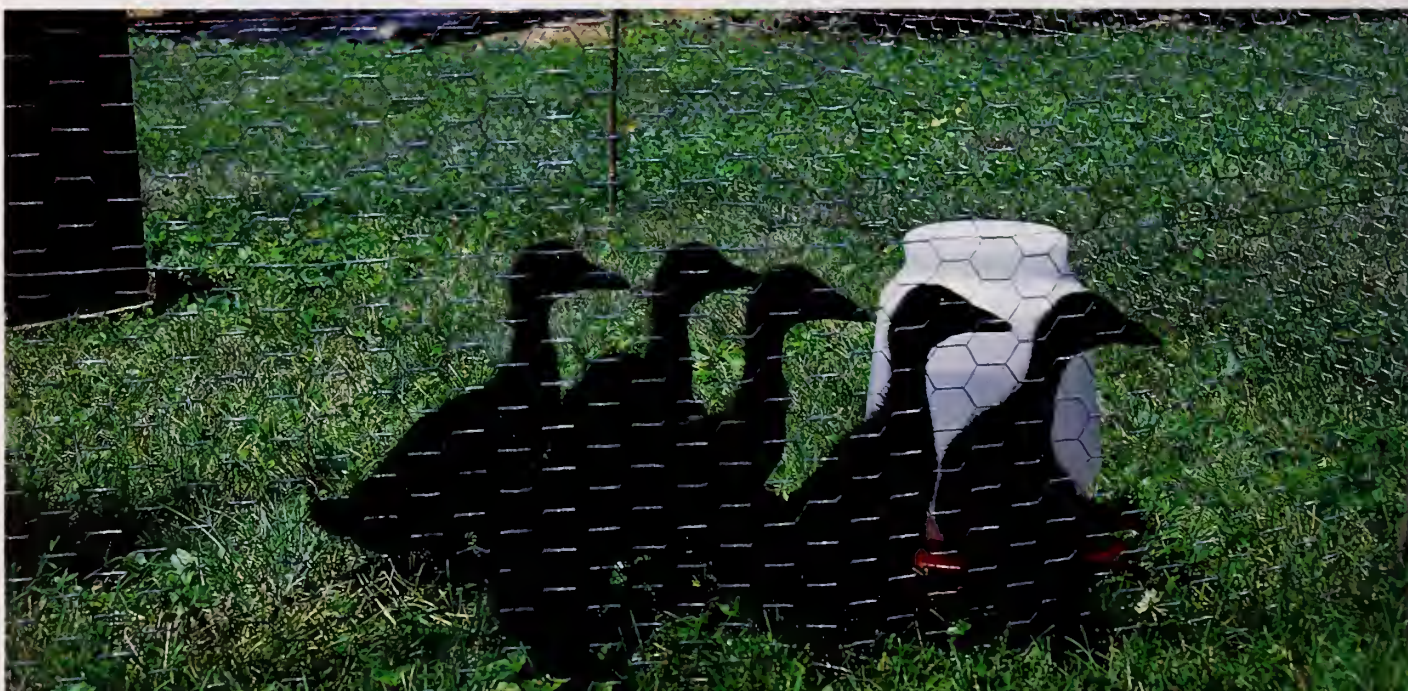
The Homestead Year

(Part II of a two-part series)

by Judith Moffett

Judy Moffett adapts her dream of back-to-the-land rural self-sufficiency on her one-acre suburban lot in Delaware County. This section continues excerpts from her journal in which she recorded her year-long experiment. (Part I appeared in the November issue of Green Scene.)

photos by Judith Moffett



Top Left: Ducklings shipped too early arrive while the author is away. The ducklings, taken in by neighbors, survive until they settle in their toasty home created by the author in a box with straw and a 40-watt bulb once used on an exercise bike. Top Right: Duck ahoy. Through a healthy adolescence this Cayuga duck paddles happily in a tubful of water. Below: Attention! Meal time?

June 20

We returned from Shawnee to discover that seven little black Cayuga ducklings had been delivered. A month early.

By mid-July I would have had all the right equipment and feed on hand. Now I'm *totally* unprepared, except for two books and a Garden Way booklet on raising ducks in your backyard.

When Ted jumped back in the car with our boxful of mail, announcing "Better get home right away — we've got ducks!" it felt like a genuine catastrophe. The Post Office had attempted to deliver them on Tuesday. Neighbors told the carrier we weren't home and the three families nearest us consulted with each other. One has a big dog and one a cat; the third family, the beekeeping but petless Castellans, took the ducklings in and put them in a cardboard box, on newspapers. The cat-owning neighbor, Jan Purbrick, drove out to McCullugh's Feed Store in Gradyville and bought four pounds of duckling crumble.

When we roared up, neither Jan nor the Castellans were home. The third neighbor, Betsy Stedje, gave me the story, but she didn't know who had the ducklings now. The Castellans were away for the weekend. Not knowing where the ducklings were was almost worse than having them come a month too soon. While I was waiting for somebody to get home and bring them over, I kept trying to call the hatchery; but it was late Friday afternoon and nobody would answer the phone.

When neither neighbor had returned after several hours, I went back to Betsy Stedje, who has a key to the Castellans' house, and asked her to let me in. Betsy and her little boy, John, and I, all traipsed over.

"The box is still there!" John announced, peering through the window. Indeed. The first thing we heard when we got inside was a chorus of pitiful peeping. There they were: seven balls of black fluff, huddled together. They'd spilled all their water long since; the pie pan was dry and the newspaper soaked on the bottom of the carton. It was cold in the house, probably 65° or so, very cold for baby ducklings. I picked up the box, Betsy grabbed the bag of feed, and we took them home.

Once I'd given them some water and food, which they gobbled desperately, I fetched the duck books and skimmed frantically for duckling basics. These babies had been in a box lined with newspapers, in a cool house, for three days. They'd probably been handled some by delighted and fascinated Stedje, Purbrick, Hasselberger, and Castellan children; I wouldn't have



Cayuga duck eggs.

been able to resist them if I were a kid. Moreover, they'd been splashing around (and pooping) in their drinking water.

In a normal summer this wouldn't be so bad, but this isn't a normal summer, and wet duck down has no insulating value at all, in sleeping bags or jackets or on the actual duck. My books said: "The first 24 hours after the ducklings arrive are *critical*"; they must have food, water, and rest, their bills should be dipped in warm water, they shouldn't be handled or disturbed. The books said newspapers are too slick for ducklings and can cause them to develop spraddled legs, that it's of the utmost important to keep them dry, prevent them from walking in, and soiling, their water and feed, and keep them at a temperature of 90° degrees for the first week, to be lowered by five degrees each week thereafter.

From the postmark on the shipping carton I concluded the ducks were five days old. These babies had *never* experienced optimal conditions. How serious this early poor treatment may prove to have been I've no idea. The book said if they were noisy and huddled together, it meant they were cold. My little ducks clumped together and piped continually. Clearly, the first necessity was to get them dry and warm.

I found a clean cardboard box, taped the flaps upright to make it twice as deep, and put in a couple of inches of straw. Then I

put the ducklings in, one by one, trying not to squeeze.

The little brass reading light I once used on my exercise bike takes a 40-watt bulb, enough to generate a significant amount of heat. I clamped that onto the top of the box and covered the box with a towel. Soon things got quiet in Duckville. Score one.

I slept lightly and woke early, worried that the babies might not be okay. And indeed they were not 100% okay. They had no water, and now they were too *hot*. Ted's thermometer read 94° in the box, and the ducklings were all huddled as far away from the light as they could get. Adjustments to the towel took care of that.

This morning when I opened a bottle of Bee Go, packed in lovely clean wood shavings, my first thought was: what perfect litter this would make. I got a new and bigger box, a poultry box appropriately enough, waxed inside and out. I dumped in the shavings, then transferred the little ducks. I watched for a while as they tried to eat the shavings, picking them up in their beaks and jerking their heads to try to make them go down, but they're still too little, and by a couple of days from now, when they might have a chance of succeeding, they'll be back on straw and the manure-soaked shavings will be in the compost bin.

During the day I devised some improvements to the basic food and water dishes: the pie pan, with a soup bowl inverted in the



The author harvests onions, which are then cured in the garage.

middle, makes a trough for feed, and a small bowl with a jar of water inverted in it makes an even less vulnerable waterer, one they can't climb into, soak their down and get chilled (though they still do manage to poop in both).

I swear they've grown visibly since yesterday.

* * *

July 4

The rain gauge shows 1.4 inches overnight. The triangle of sweet corn, *flattened* by the rain, reminds me that by now I'd normally have hilled it, but can't because it's planted in black plastic this year. Another good use for the soil excavated out of the pond, which I've still to finish putting on the second bed of potatoes, a project deferred like so many others owing to the seven unexpected webfooted guests.

The Brussels sprouts are so terribly chewed by slugs I'd despair of them if I didn't remember the cabbages looking just as bad at that age. And we've eaten two big cabbages already, with lots more coming.

Speaking of cabbages: I keep seeing white butterflies, and little worm droppings when I check, but never any worms. My theory is that the birds are eating them. A catbird, a song sparrow, a cardinal, and a peewee are regulars, as well as other incidental visitors. I think the peewee may be catching bees, but I'm very fond of flycatchers and honored to have one in my garden, even so.

Ted represented us both at the Fourth of July cookout. I stayed home to hill up the flattened corn: filled the dirt cart four times with topsoil, shoveled it around the bases of the stalks, then pushed it up against them to stand them upright. Not sure how long this will be good for. The other bed of corn should also be done, but I was too beat. And I was also dying to get the ragweed out of the asparagus forest near the hives.

I debated about whether to suit up for the near the hives, but I opted for the bee veil and a low profile, crawling cautiously on hands and knees along the bed with the pruners and clipping off ragweed stems and leaf petioles. No way to *dig* them out without digging up the asparagus. There turns out to be more than ragweed in that bed, mainly honeysuckle and violets. Some of the elephantine ferns had flopped over, making the job even harder. I couldn't see too well in the veil, either. Still, it looks better. Bees sizzled past my ears, but I kept low and was not menaced.

I wondered, sitting stupified with exhaustion on the patio before dinner, if this



July garden; beehives in the background.

kind of overwhelmed feeling might not be part of the homestead life — the reality that you can work incredibly hard and lose it all to weather, disease, grasshoppers. Raccoons can eat your ducks. Your fish can get cloudy eye, your Prima apple tree can get cedar apple rust and die. You can do *something* about these problems, if you try, but to a large extent they're beyond your ability to control, to determine the outcome of, especially if you limit yourself to organic sorts of responses. Just being knowledgeable and working hard won't guarantee success.

* * *

The Romano beans have their first flowers.

July 5

In the nick of time, some really nice weather: bright, cool, clear. A perfect summer day. My first chore was picking blueberries. Tedious as ever — they're all different degrees of ripeness, I have to crawl around under the netting *making choices*, and they aren't even all *that* good to snack on, even the dead-ripe ones. But in just over an hour I'd picked three pounds, more than twice as much as before in an equal amount of time (but those were much smaller berries). Plenty for a batch of superlative jam, eight half-pint jars to go into the freezer.

July 7

I've put "hill the potatoes" on at least three different Things To Do lists. Now that job is done. I used more topsoil from the pond excavation to bury the straw mulch and lower stems of the plants in the second potato bed, hoping both to increase the harvest and to thwart the mice tunneling under the straw at soil level, leaving the roots of the potato plants dangling in air. Two more thriving plants bit the dust this

week. The ducklings are also beating up the potatoes in their passionate search for slugs. They bite pieces from the outer cabbage leaves, too; but at this point the cabbages can tolerate a lot of duckling bites.

Another bright, cool, sunny day, perfect for the onion harvest. I lifted the whole crop this morning and left the bulbs to dry in the sun right on their own bed. A good-looking harvest, some very nice big onions and not too many maddeningly little ones. One of the smallest went into this evening's delicious three-lettuce chef salad. The central lettuce leaves are suspiciously small, especially the Black-Seeded Simpson; they'll have bolted by the time we get back from our trip — but the cabbages are ready *now*, so we'll simply switch salad greens. While I was working the ducklings poked around in the soft earth turned up by pulling out the onions, clucking happily.

This afternoon, with rain threatening, I piled the bulbs in the cart and moved them under cover. The whole onion crop is now spread out to dry on screens set up in the garage.

July 18

We got back late last night, and went out into the sodden back yard with a flashlight to check the pond and garden.

In the eight days we've been gone the garden has *exploded*. They had some rainstorms here — an inch of water accumulated in the gauge — fueling a jungle growth of green. All the indeterminate tomatoes are enormous, flopped sideways over the rims of their cages. *Lots* of baby tomatoes on them now. The sweet corn is very tall and tasseling, and the bed I fretted about while we were away, because I hadn't had time to brace it with soil, stands as tall and straight as the hilled-up triangle patch. The bean vines are waving at the tops of their poles, covered with pods and flowers. The sweet potatoes are runnering at last. The big cabbage heads have split from the rain. The potato bed I'd covered with soil just before leaving looks great — no more deaders, lots more foliage. And in the garage the onion leaves are wilted and dried.

We looked about us this morning for the most desperately needed harvesting activities and set to work. I picked blueberries: two pounds, two ounces, with probably no more than one pick to go before we can disassemble the netting system and weed and mow the tangle of ornamental strawberry vines and grass grown up around it. To pick the berries you have to remove all

the bottom boards, unclip the clothespins on one side of each section, and crawl completely inside the netting — an awkward, slow, uncomfortable business.

I cut a cabbage, the one hardest hit by ducks, and Ted made cole slaw. We both picked Romano beans to marinate for another salad — teamed with lettuce from the health-food co-op; our own three types all bolted while we were gone. And while Ted was steaming those I went out to the garage with a pair of scissors and cut the leaves off the onions curing there.

July 22

The onions came in from the garage today. Total weight from those two quarts of sets: 35 pounds.

This afternoon we took apart the blueberry netting system and picked the last pint of berries. Disagreeable stuff to work with, that netting; it snags on everything, and weeds had grown right through it, lacing it to the ground. The best way to deal with berries, blue, black, or rasp, I'm now convinced, is to cage them: a permanent framework with removable screen panels, big enough to walk into for picking.

This evening we blanched and froze one pint of wax beans and four of Romano beans. The garden is in a dismal and desperate state (though I brought in, and we consumed, the first tomato: a bird-pecked Viva Italia, and very good it was). After a whole week back I've yet to do any gardening beyond picking beans and decapitating cabbages. I'd meant to spend all of yesterday out there, but with the rain and chilly, cloudy weather, the plants were too wet to work among. They've grown during the week since we got back, though, and the overbalanced tomatoes are pulling up the stakes that support the cages.

The whole garden is a riot of weeds: nut sedge everywhere, thistles all through the potatoes again. Still, everything looks healthy and vigorous. (Ted says it's thanks to the perpetual fertilizing of the ducks, and he may be right.)

July 26

Ted and I whipped the tomatoes into shape this morning (and found a second ripe Viva Italia in the process). He drove stakes, I pruned and rearranged, lifted and hauled. All the cages are straightened up now and all the loosened stakes driven in deeper. But also the foliage on each of the indeterminate plants (Beefmaster and Gurney Girl) is a densely piled mat highly resistant to air circulation, especially in this protracted rainy spell. Once again I'm



Above: The author and her husband weave blueberry stakes. Below: Blueberry system.

astounded at my capacity to forget how hopelessly inadequate these three-foot-high cages made of two-inch chicken wire are to contain or support the gigantic tomato plants I want to grow inside them. Every year I deny, and then capitulate to, the same facts.

On the other hand, every year we get enough tomatoes for 80 pints of spaghetti sauce, so the plus to the system is a good harvest, and that's probably why I go on like this in spite of what I know. These untidy plants, yellowed by septoria leaf spot, are loaded with big green tomatoes.

We have bell peppers on one plant, jalapenos on at least one other, and an eggplant started. I picked the second Jazzer cuke, a nice big one. Most of the cabbages have now split, more than ever before. It's the rain. Ted keeps making cole slaw but we can't keep up with them; I suspect 20 was too many for us this year, given that Salarite isn't a "keeping" type. Luckily the ducks like cabbage.

The sweet corn is growing silks, but the popcorn's starting to tassel too. It's important that the popcorn not pollinate the Butterfruit. That tall row of beanpoles between the two plantings was put there as a buffer, but I was relying more on the 25-day difference between them and, as is often the case, they're coming to maturity much closer together than that.

If the rain would stop, I could get in and do something about the weeds.

July 27

It was finally dry enough in the garden for me to tackle the jungle growth of weeds. I went through pulling thistles and pokeweeds out of the soil I'd heaped on the potato beds, nutsedge out of the paths and cucumber bed, violets and ground ivy out of everywhere. There was so much nutsedge in path #1 that when Ted mowed it, we added another six inches of leaves over the whole thing. In a couple of hours I'd done a pretty good job of cleaning up the main garden, beds and paths both, and could hold things out of the way while Ted mowed the long, long grass in the two turf paths. Surprising how little actual time it can take to do these jobs that loom so large in prospect.

In the course of cleaning and tidying things up I decided to dig the volunteer potatoes, even though none of the plants had died. The big volunteer in the pepper-and-eggplant bed I particularly wanted to get out of there, as the eggplant on whose space it most encroached was looking none too robust, much yellower than the others.

So I pushed a shovel down into the soil — soft from the rains — and up came treasure. Half a dozen nice-sized smooth-skinned potatoes plus several little ones. None of the other volunteers produced on the same scale, but by the time I'd dug them all we had some six pounds of potatoes, perfect except for two the millipedes had gotten into.

Mexican bean beetles have hit for the first time since 1988, one pole of wax beans only so far. As I picked I noticed the lacy leaves and the yellow larvae, pretty good-sized already. I hand-picked all the larvae I could find and took them to the duck pen.

Two more pints of wax beans went into the freezer.

July 30

I looked for more bean beetle larvae in vain, but this afternoon I spotted the first striped cucumber beetle of the season on the smaller Jazzer plant. Great. I hand-picked and squashed it. If they're going to be around now I may decide to spray with Rotenone, something I dislike doing because it kills beneficials too, but with only two plants on the trellis I may do it anyway. On the insect front, I saw a lacewing on something today, corn? beans?, and the other day I plucked a tomato hornworm off a potato plant and flipped it into the duck pen, where one of the ducks instantly pounced on it.

I walked around with the bag of Vermont Organic Fertilizer and fed what needed feeding. This excluded the tomatoes, beans, and cabbages, and the Butterfruit corn under plastic (which is too far along to profit from it anyway), but included pretty much everything else. Several more tomatoes are starting to ripen. Eggplants and peppers are coming on, and I picked a couple more cucumbers. Before we know it the main harvest will be rolling in.

* * *

Epilogue

By first frost in October we had stuffed the freezer with spaghetti sauce, beans, peppers, sweet corn, applesauce, ratatouille, pickles, blueberry jam, and the whole carcasses of two of our skinned and dressed ducks destined to become the *pieces de resistance* of our holiday dinners. Onions, sweet potatoes, and fifty pounds of honey — a full year's supply of each — were in the basement or the refrigerator.

On the other side of the ledger, and this despite the best efforts of the seven greedy ducklings, slugs had eaten the young seedlings from each of my three plantings of

carrots and two of melons to the soil line. And because of those tunneling mice, the potatoes under straw yielded only a puny and disappointing harvest.

But there are always disappointments, just as there are always unexpected successes, and every year is different. What I learned about gardening during the Homestead Year merged seamlessly with my past experience and future expectations of growing food; I'd have produced less but learned almost as much, I'm sure, during any gardening year.

It was the livestock — honeybees, fish, the ducks above all — that changed a suburban acre into something that truly felt and functioned like a very small organic farm, and transformed me from a pro gardener into an apprentice farmer. And that first frost was by no means the marker even for the livestock that it had been for the garden. They kept right on — through the winter, into 1993.

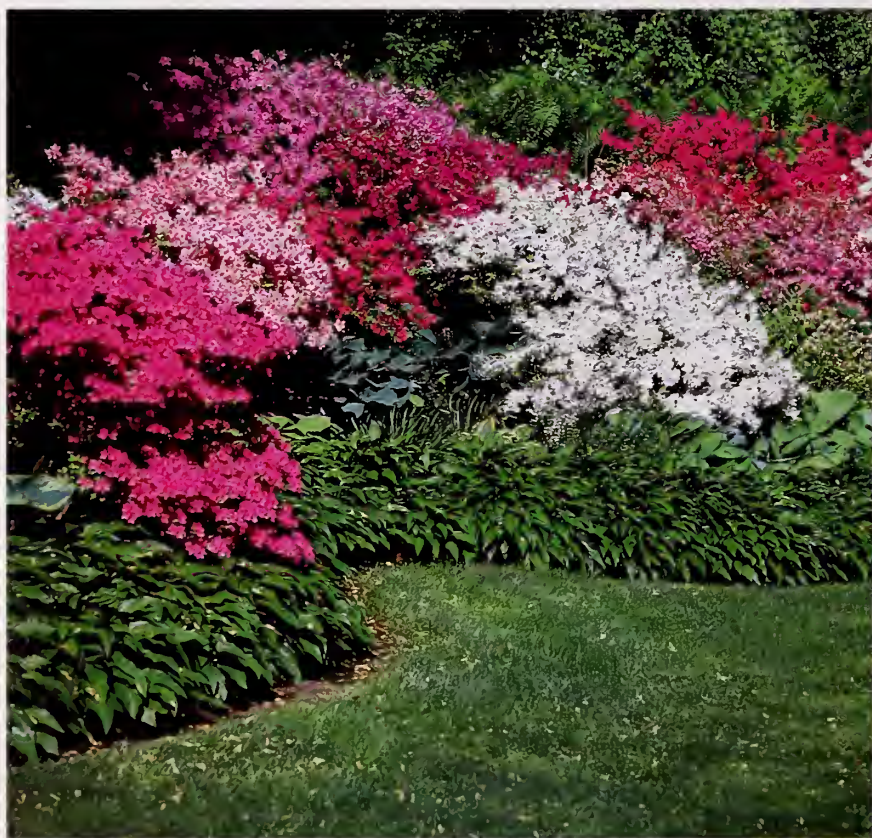
In particular, the pair of surviving ducks kept on. Unlike the fish and bees, which sat tight through the cold months, the ducks were abroad in the worst weather, printing little webbed tracks in the snow with their black feet, quacking each morning till one of us brought their feed and bucket of warm water. They acquired names, Sir Francis (Frank) and Winnie, and revealed personalities. In no time the idea of butchering them had become, as it remains, unthinkable. (Year-old Winnie, incidentally, has been laying a delicious daily egg for months.)

As for the future, projects like this have a way of yielding unexpected results. What was conceived as an experiment in self-sufficiency and recycling of resources has led in practice, now that the apprenticeship is over, to fantasies of being a *real* farmer — of raising Cayuga ducks and catfish together on a good-sized, well-balanced pond, of broad fields of clover and many hives of bees.

The homestead began as a fantasy too. Wish me luck!


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Judy Moffett is the author of eight published books including poetry, Swedish translations and science fiction. Moffett is adjunct professor of English at the University of Pennsylvania and staff reviewer for the University's *Pennsylvania Gazette*. Current projects include a TV script *Star Trek: The Next Generation* and a nonfiction book: *Webfooted Friends and Others: Homesteading in the Philadelphia Suburbs*, from which this article has been adapted. Moffett and her husband Ted live in Rose Valley, Pa.



Top: Inta Krombolz makes the most of her shade garden by using a variety of textures, colors and shapes. Note how the buttery yellow and green bed of *Hosta* 'Kabitan' brightens up a dark green area on the left. **Left:** Bright festive azaleas and ferns (center, top) begin the transition from woods to lawn. Below the azaleas, hostas with blue, green, yellow and variegated leaves wait their turn to stand out later in the summer. Note the line of bricks sunken under the bottom layer of hostas, eliminating weeds and edging problems. **Right:** The sunniest space on Krombolz's high shade property receives about six hours of sun, enough to grow stately digitalis, delphinium and the prolific summer *Phlox paniculata*.

Tropical Influence in a Shade Garden

 by Anne S. Cunningham

This is no shy shade garden; it sings out to passersby, beckoning them to celebrate the season. Bold, bright and full of colors, Inta Krombolz's property reflects her childhood spent in Brazil. Large, unusual plant groupings, startling color combinations, massive both in quantity and in size, bring a warm, tropical, lush feeling to a high shade garden in Chester County, Pennsylvania.

In spring, Krombolz's property looks like a Latin American *carnival* with dancers' colorful, multilayered skirts swirling around. The perimeter of the 3½ acre property undulates with stretches of brilliant azaleas in many shades of pink, scarlet, and white. Beneath tall deciduous shade trees, bold borders taper down to subtle details. Below the azaleas on one bank, layers of green, yellow, blue and variegated hostas stand out among clusters of feathery ferns whose delicate greenery is repeated by a stretch of corydalis at the front of the border, with tiny sparkling yellow flowers.

"I'm a perfectionist when it comes to my garden," Inta Krombolz admits. "I do all the garden work myself, with lawn mowing help from my husband."

She gardens at a frenetic pace, fitting her love of plants and propagating into whatever daylight hours aren't taken up by her job teaching English as a second language. (She's fluent in five languages: her parents' Latvian, and Portuguese from Brazil, Spanish, French and English.) Krombolz is also an ardent flower arranger and chooses many of her garden plants for their arranging properties.

A desire for organized neatness led to the initial layers of *Hosta lancifolia* and *H. ventricosa* in circles around the gardens and around the bases of individual trees. Below the drip line of the hostas she dug in sunken borders of bricks, to delineate the lawn from the gardens, to discourage weeds and to eliminate the need for edging.

Farther away from the house, Krombolz separates the surrounding woodland from her lawn and garden space by using *Petasites japonicus*, a huge, hardy perennial border plant that grows up to six feet tall, with round leaves 3 or 4 feet across. She relieves the potential monotony of the woodland border by alternating stretches of the deep green *Petasites* with swaths of graceful vertical grasses, primarily the airy white and blue-green *Miscanthus sinensis*, a

Inta Krombolz makes the most of her Chester County shade garden by using a wide variety of textures, colors and shapes.

sturdy clump-forming grass that grows about four feet tall.

When Krombolz first planted her property, 13 years ago, she was content with a blast of spring color followed by an essentially green and white summer shade garden. Dwarf conifers, hostas, grasses, ferns and ground covers kept the garden growing

"White is essential in every garden," explains Krombolz. "Spaced at intervals in a garden, white is the great equalizer, especially if you use as many different shades of lavender, purple and pink as I do."

low and neat. But one by one, perennial flowers that could tolerate light shade captured her fancy. Tall spikes of magenta digitalis and nodding, deep pink dicentras shine out in between more subtle white-flowered woodland perennials like the green and white variegated Solomon's-seal (*Polygonatum odoratum variegata*). Meanwhile thousands of hostas begin to send up their tall pastel flower scapes.

Krombolz likes hostas for their tremendous variations in color, leaf shape, size and texture, in addition to their ability to readily multiply and suppress weeds once the hostas are established. Hostas as borders, as highlights, as features, and planted with each other in a special hosta garden demonstrate the extent of her large collection. The biggest hostas are staked, such as 'Krossa Regal' (vase-shaped clumps of grayish blue leaves with 5 foot scapes featuring lavender-pink flowers) and 'Sum and Substance' a huge gold-leafed plant with visual impact even from a distance,

where it looks like a patch of sunlight that has struck the corner of a shade garden.

Yellow-leaved hostas show up best in her woodland garden, whether they're the thickly quilted leaves of *H. 'Zounds'* (heavily textured bright gold leaves with pale lavender flowers in early summer) or the smaller very early gold-yellow leaves of *H. montana 'Aureo Marginata.'* She discovered that the small butter yellow and green papery thin leaves of *Hosta 'Kabitan'* shine brightest when they're planted in front of the frothy yellow flowers of *Coreopsis verticillata 'Moonbeam.'*

After her mother's death three years ago, Krombolz wanted to bring some of her mother's perennials to her own garden, but wasn't sure how to incorporate them. There was not enough sun in the high shade spaces behind her house, so she decided to put the perennials in front of her house, along the driveway where they'd receive about six hours of sunlight.

Today the huge front perennial garden revels in color and sports bright combinations of everything except flowers that are orange and peach. Big, bold purple balls of *Allium 'Globemaster'* and 'Purple Sensation' stand with tall pink and white digitalis and blue *Platycodon grandifolia* above swaths of blue and pink perennial geraniums (*G. himalayense* x 'Johnson's Blue' and *G. lancastrense*) and deep pink *Phlox paniculata*. Annuals like cleome in pink, white and lavender stretch tall throughout the garden and reseed themselves so voraciously that she takes out more than she leaves each year.

"White is essential in every garden," explains Krombolz. "Spaced at intervals in a garden, white is the great equalizer, especially if you use as many different shades of lavender, purple and pink as I do." Her favorite late spring white flower is a graceful *Gillenia trifoliata*, with white star-shaped flowers growing on reddish 40-inch stems. Summer whites include *Centranthus ruber 'Albus'* and a white nicotiana that grows to three feet.

As summer wears on, the true garden soldiers stand tall above the withering warriors. One white plant that looked as good in September as it did in June was the large cloudlike mound of *Kalimeris pinnatifida* also known as *Asteromoea mongolica*. The small double flowers resembling asters lasted so well, in spite of inconsistent water

One hosta clump seeded itself in moss on a boulder, where it flourishes and flowers and confounds the experts, including members of the Delaware Valley chapter of the American Hosta Society who held their annual meeting at Krombolz's house in 1993.

conditions, Krombolz can't wait to plant them throughout her garden next summer. Another stalwart that won her favor was *Artemisia* 'Huntington Gardens,' an airy, four-foot-high silvery herb with finely cut leaves.

Krombolz loves to divide and transplant. Whenever she puts plants in a new area, she first improves the soil with sand, peat moss, mushroom soil, and aged manure courtesy of nearby horses. She digs it all in with a shovel because she thinks "rototilling leaves the finished product too powdery."

Her passion for propagating led her to divide tiny clumps of *Ophiopogon japonicus*, a short dark grass in one of her dwarf conifer gardens, until the grass became an impenetrable, weed-proof ground cover tough enough to walk on.

When it comes to dividing hostas, even if they're sports not true to their parent, she just puts them along an orphan hosta bank that lines the driveway. Part of her success with hostas results from careful observation and exact timing. She divides them every year when their spring shoots are up but have not yet unfurled. One hosta clump seeded itself in moss on a boulder, where it flourishes and flowers and confounds the experts, including members of the Delaware Valley Chapter of the American Hosta Society who held their annual meeting at her house in 1993.

Krombolz's decorating style, both outside and inside her house, is a surprising contradiction. While she admits to being addicted to neatness, she also loves to pack a room or a garden with a variety of different things. In her sunroom, tables are covered with several layers of contrasting though complementary fabrics. In her gardens, she lavishes flowers of so many different colors and varieties together, they look like an extra-large box of pastel crayons. She explains: "I want people to walk into a room and not be able to see everything at first glance. There are surprises and treasures; the more they look, the more they'll notice." And the same is true for her gardens. From a distance, they're brilliant masses of color. Up close, visitors see individual plants that stand out against the



Summer alliums that add vertical interest to the shade garden include this *Allium sphaerocephalum*.

blocks of color. Plants like small *Pentas*, an eye-catching magenta-colored annual that sparkles in front of gray and white perennials. Or bunches of tall *Allium sphaerocephalum*, a deep red-purple tear-shaped summer allium that looks striking against yellow foliage hostas.

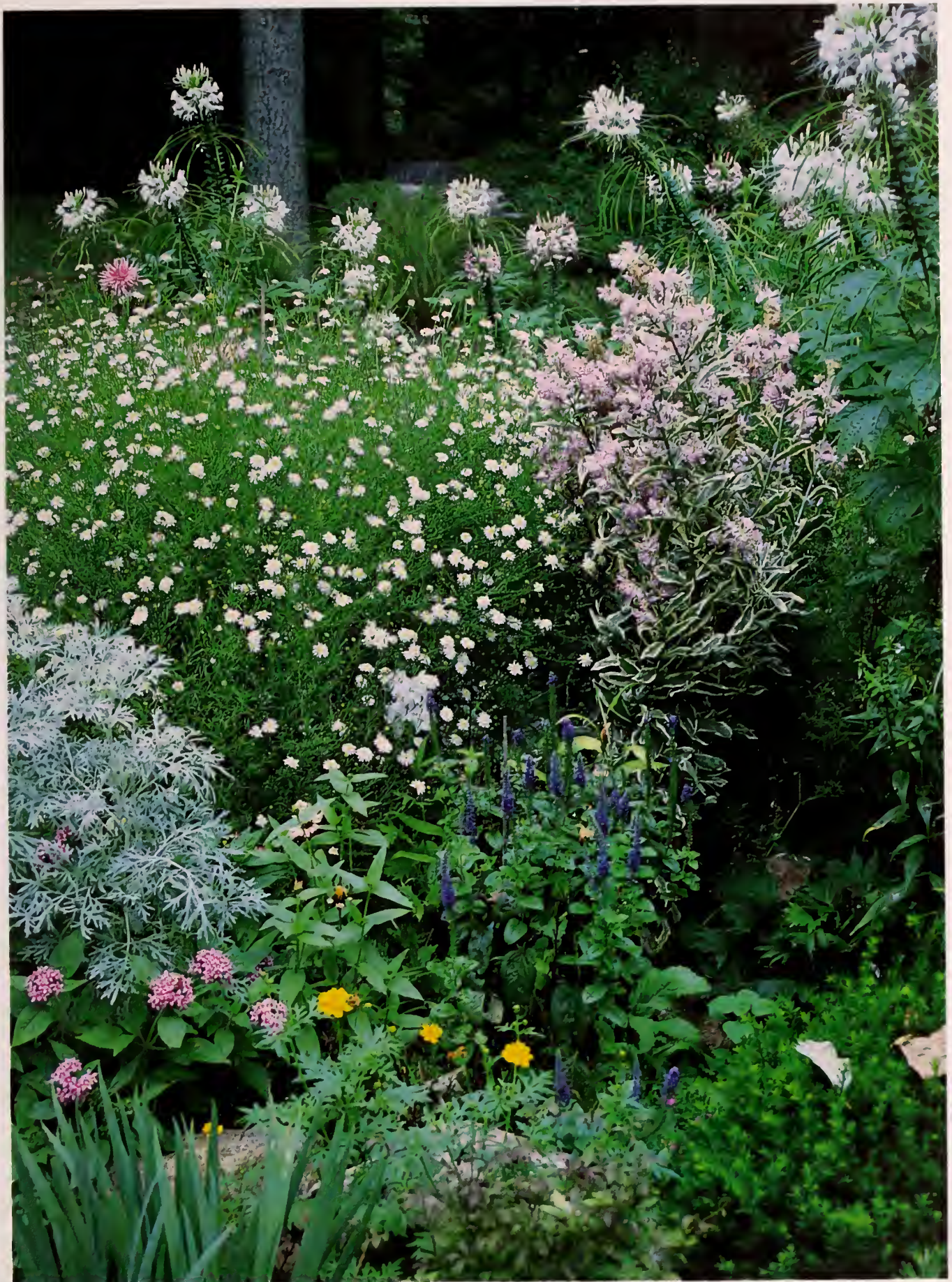
"I love variety, and I'll try anything once," she says. "Even though a catalog says a plant grows to 24 inches, it can stretch up more than three feet high in my garden, probably searching for the sun." Sometimes the extra height is attractive, but often it is merely leggy and then she either moves or gives the plant away. She constantly moves plants from one place to another, searching for the ideal spot in terms of sun and in relationship to other plants.

Height is as important to Krombolz's garden as are the expanses of color. In addition to choosing tall plants like cleome and digitalis, she favors climbing vines. In spring, bright pastel flowers shine from clematis vines winding up around almost every vertical post on her property. In summer, she places pots of *Mandevilla suaveolens* with big, glowing pink flowers along tall trained plants, at strategic spots along her deck. The tropical mandivillas

echo her love for strong color and bold plants that makes a statement.

But gardening is about learning and change, and Inta Krombolz is looking at gardens in a new light. Perhaps it was the need for a place to put her miniature hostas, some of which are no bigger than a few inches, or perhaps it was from observing gardens around her, but now she is thinking small. Trough gardens with miniature alpine plants tucked into tiny landscapes sit in places of honor by her back door. She's creating a new small sitting garden with an arbor. When she was asked if it would have the same warm tropically lush flavor as the rest of her gardens, she said "A small garden is a bigger challenge than a large one, where I can try lots of different plants at once. I'm moving slowly because in a small garden, every single plant counts."

Freelance writer/photographer Anne Cunningham's work has appeared in the *Philadelphia Inquirer*, *Philadelphia Magazine*, as well as a number of national publications. A frequent contributor to *Green Scene*, Cunningham chaired the Editorial/Design Committee for the Pennsylvania Horticultural Society's Cookbook: *Great Recipes from Great Gardeners*.



By September, the high shade perennial garden stands tall with delicate pastel cleome, pink flowered variegated physostegia, silvery *Artemisia* 'Huntington Gardens,' and the full-flowered, white cloudlike *Kalimeris pinnatifida* a.k.a. *Asteromoea mongolica*.



photo by Patricia A. Taylor

Left: *Athyrium angustum*, northern ladyfern at the New York Botanical Garden. Right: F. Gordon Foster at work.

F. Gordon Foster: He Can't Keep His Ferns to Himself

by Patricia A. Taylor

F Gordon Foster, a mechanical engineer for Bell Laboratories, did not know on August 8, 1948, that the day's activity would change his life forever and that it would also enrich gardeners' beds and borders throughout the country.

A friend, knowing of Foster's love of microscopy, suggested that he might want to examine the minute structure of a fern spore.

Foster took a spore from the back of a plant in his Sparta, New Jersey garden, put it on a glass slide, labeled it, and then slid it under his microscope. That did it.

Foster found an avocation that was to lead to numerous awards and the authorship of *Ferns to Know and Grow*, a book still in print 30 years after its initial publication.

Foster saw a reproductive form one-third to one-half the width of a human hair. It was part of a process that had gone on for over 300 million years, a process that had survived both the extinction of the dinosaurs and the periodic ice ages.

One could create a science fiction world based on the perpetuation of this life form. Ferns do not reproduce from seed. Indeed, their reproduction is so complex that scientists did not completely understand the process until a century ago.

Basically, a fern goes through two cycles to reproduce itself. The first stage, when the spore germinates, produces a green, heart-shaped intermediate plant, called the prothallium. It is this intermediary that contains what we think of as sexual parts — both male and female.

Though tiny — usually only 1/4 in. in size — the prothallium sprouts rootlets to supply nourishment and is an independent life form. When the sexual organs are fully formed, it fertilizes itself.

Self-fertilization provides the death knell for the prothallium. A new fern, rising as a Phoenix among its ashes, grows and assumes its place in the world.

More than 10,000 plant species grow this way. While the spore of each is different

Working throughout the day, these people took 210 hardy fern varieties from the Foster garden.

— varying in topography, shape, and color — all can only be fully examined through a microscope.

This vast domain of minute forms represented a veritable gold mine for a microscopist with a zest for intellectual adventure. Initially, however, there was a hurdle. Gardeners in this country simply did not think ferns suitable for flower beds. After Foster had roamed the state of Vermont — “a fern lover's paradise” — he found the supply of other species quite limited.

Thus, when Foster travelled abroad he visited public display gardens and collected fern spores into little white envelopes, all carefully labeled. That was all quite legal for, as Foster notes, “it violates no plant immigration laws and is conservation at its best.”

Initially, Foster's trips to typical destinations such as the North American continent and Europe, had been for pleasure. As F. Gordon Foster delved into the intricacies of the fern world, however, the purpose of vacations became increasingly more focussed and the destinations more varied: the Galapagos, Tasmania, Fiji, Nepal, Bali, and Ceylon (Sri Lanka today), among others.

Foster brought fern spores home from all these places and spent many a delightful hour examining them with his microscope and an even greater amount of time propagating them.

“A transparent plastic container and a light but sunless windowsill are excellent for the beginning fern grower,” he says.

Ptericulture, a term Foster coined in a May 1982 *Green Scene* article*, is not for the impatient. It generally takes 18 to 24 months from the initial sowing of spores to see a full-grown fern.

*“Growing Ferns from Spores: ptericulture,” F. Gordon Foster, p. 21.

Ferns to know and grow

With the ardent belief that more people should be aware of the elegance and grace of ferns, Foster wrote *The Gardener's Fern Book*, published in 1964; in 1971, he rewrote it and it appeared under its current title of *Ferns to Know and Grow* (see box on page 33.)

When Foster retired from Bell Labs he became a fulltime ptericulturist. He filled his garden with exotic plants from around the world, plants to be found nowhere else in this country.

The Pennsylvania Horticultural Society was the first horticultural organization to recognize his efforts and in 1978 awarded him its Distinguished Achievement Medal. When his book was enlarged and published by Timber Press in 1984, the Garden Writer's Association of America awarded it the Quill & Trowel as the best garden book of the year.

The award coincided with Foster's 80th birthday. When he would stroll out into his property, he knew he looked upon the finest collection of hardy ferns in this country and one of the top-ranked in the world.

Foster knew that he would not always be able to gaze upon that collection. He picked up the phone and called The New York Botanical Garden. Would they like a hardy fern collection? They most certainly would.

Four experts came to choose and mark the plants they believed most suitable. They were then followed by eight workers with spades and shovels and a large moving van. Working throughout the day, these people took 210 hardy fern varieties from the Foster garden.

In 1988, Foster received The New York Botanical Garden's Distinguished Service Award. In notifying him of the award, then-president James M. Hester wrote: “The F. Gordon Foster Hardy Fern Collection is one of the best of its kinds in the world.”

The removal of 210 plant varieties would make a dent in the worthiness of most gardens. That was not the case as far as

F. Gordon Foster's fern collection was concerned. Many superb specimens remained. Donated to the Somerset County Park Commission's Leonard J. Buck Garden in Far Hills, New Jersey, they are now displayed in a garden setting directly behind the Visitor's Center.

With public and scholarly access to his ferns guaranteed, Foster soon after moved to Monroe Village, a retirement community in Jamesburg, New Jersey. There he continues his work in a small converted bedroom with tables containing his microscopes, bookshelves crammed with literature on both ferns and microscopy, and walls decorated with plaques attesting to his numerous awards.

These days, there is no garden in which to transplant his mature ferns. That seems tragic to some but to Foster it means he just has to urge visitors a bit more persuasively to take home plants for their gardens.

F. Gordon Foster celebrated his 89th birthday on February 27, 1993; on that day he couldn't help but browse through the spring-summer 1993 catalog of Timber Press. There, on page 4, was a description of the revised and enlarged edition of his book, appropriately described as the "classic work on ferns."

What a way to celebrate a birthday — knowing that a world-ranked plant collection will be maintained and that a standard reference work has been reissued once again. How fortunate for the horticultural world that F. Gordon Foster simply cannot keep ferns to himself.

Fern Books

Ferns to Know and Grow, 3rd Revised Edition, F. Gordon Foster, Timber Press, Portland, OR, 1984.* (1993 reprint with nomenclature available in stores.)

The Gardener's Fern Book, F. Gordon Foster, Van Nostrum, Princeton, NJ, 1961.*

*Available to members through the Pennsylvania Horticultural Society Library.

Patricia A. Taylor is a frequent contributor to *Green Scene*. Her latest book *Easy Care Shade Flowers* was published by Simon & Schuster, N.Y., in February 1993.

F. Gordon Foster's Starter Ferns

Nine attractive, easy-care plants recommended for garden settings

Maidenhair fern (*Adiantum pedatum*). Among the most beautiful and elegant of the hardy ferns, this 1 ft. to 2 ft. tall plant is native to both North America and east Asia; best planted at the edge of wooded areas.

Lady fern (*Athyrium filix-femina*). Grows up to 3 ft. tall and appears as delicate, ethereal fans through the northern hemisphere. Forms slowly spreading clumps that are lovely in rocky settings or when contrasted with thicker leaved plants.

Japanese painted fern (*Athyrium niponicum*). An elegant plant, with a grayish green cast to its leaves and a maroon tinge on its ribs. Depending on location, the plant will grow 1 ft. to 2 ft. tall.

Marginal shield fern (*Dryopteris marginalis*). Native throughout eastern North America, this carefree plant stands out as a single specimen or when grouped with its evergreen 2 ft. tall fronds. Superb in formal settings because it does not spread (the crown just gets thicker).

Ostrich fern (*Matteuccia struthiopteris*). Grows up to 6 ft.; one of the most dramatic and tallest ferns to be found in flower beds. Be warned: it spreads quite quickly through underground runners.

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Extreme right and center, *Dryopteris intermedia*, an evergreen woodfern and (left at base of rock) *Dryopteris campyloptera*, mountain woodfern at the New York Botanical Garden.

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A photograph of a garden scene. In the foreground, there is a dense cluster of Hosta 'Kabitan' plants, characterized by their long, lance-shaped leaves with prominent yellow-green variegation along the margins. Behind the hostas, several yellow Coreopsis verticillata 'Moonbeam' flowers are in bloom, their petals a bright butter yellow with dark centers. The background is dark and out of focus, suggesting a shaded garden environment. The overall composition is a close-up, focusing on the textures and colors of the foliage and flowers.

In a Shade Garden: The paper-thin leaves of *Hosta* 'Kabitan' shine butter yellow with dark green margins. Planted in front of emerging *Coreopsis verticillata* 'Moonbeam,' the hostas help the whole shaded corner of the garden in July to glow with light. See page 29. photo by Anne S. Cunningham

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14.



18.



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Volume 22, Number 4 March/April 1994

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the green scene / march 1994

Ladew Topiary

—▲—▲—▲—▲— Gardens —▲—▲—▲—▲—

Battles the Woolly Adelgid

by Christopher Weeks

Called half vampire and half viper, the killer woolly adelgid has mobilized Ladew to mount a campaign to get rid of the pest and to plan a future for the Topiary Gardens congruent with its founder's vision.



In 1929 Harvey Ladew laid out his 15 acres of formal gardens along two main axes that met in the "Great Bowl" he dug to contain his swimming pool. He built a series of terraces to lead from his house to the "Great Bowl," lined the terraces with swag-draped walls of hemlock, and punctuated each level with topiary hemlock obelisks, birds, and other whimsies, some of which are shown in this 1990 photograph. The hemlock woolly adelgid appeared on the scene in 1989 and damaged many of the plantings along the terraces but the Ladew Board plans to nurse these ailing plants back to health through a diligent regimen of spraying and feeding.

Towards the end of his autobiography, *The Education of a Gardener** (Vintage Books, NY, 1985), Russell Page noted that a garden, "unlike painting or sculpture or buildings, grows. Its appearance changes—plants mature. . . . There are few good gardens that can be left alone." To which Barbara "Bunny" Hathaway, who heads up the Garden Committee at Maryland's Ladew Topiary

*Available from the Library for Pennsylvania Horticultural Society members.

Gardens, nods in agreement while mordantly adding, "they also grow old; sometimes they get sick and die." Still, Page also wrote that any "garden really lives insofar as it is an expression of faith [and an] embodiment of hope," and it is in that hopeful spirit that Ladew's director, Lena Caron, and Board have set forth to do battle with the hemlock woolly adelgid (*Adelges tsugae*). Moreover, because that destructive parasite has emphatically not limited its devastation to this garden, the Ladew Board

hopes that publicizing their successes (and failures) with the adelgid in Maryland may help others deal with infestations elsewhere.

The 22 acres of gardens over which Caron presides were begun in 1929 by Harvey S. Ladew on his farm about 20 miles north of Baltimore City. The "spine" of the place is an 1,100-foot-long, 15-foot-high wall of Canadian hemlock (*Tsuga canadensis*) that runs axially north from his house; Ladew sculpted the hemlock hedges nearest his house into swag-draped walls



and punctuated the terraces leading from the house to the rest of the garden with hemlock obelisks, birds, and other whimsies, all, in the late interior decorator Billy Baldwin's words, "eccentric" but in "the highest possible taste." (After all, as Eleanor Weller and Mac Griswold point out in their monumental *Golden Age of American Gardens** (H.N. Abrams, N.Y., 1991), Ladew grew famous for "knowing how to . . . perk up a drooping arrangement of tulips with a little gin.") With that controlling framework complete, Ladew then laid out 15 garden rooms within it. And while those smaller spaces, including single-color gardens of yellow, pink, and white, a rose garden, and an apple orchard underplanted with azaleas — have drawn unqualified praise from an array of international experts over the years, pride of place has always been given to his topiary work. Indeed, when members of the Garden Club of America presented him with the Distinguished Service Medal in 1971, they did so for creating "the most outstanding topiary garden in America without professional help."

Shortly before Ladew died in 1976 he created a non-profit foundation and hand-picked a Board to manage his beloved garden. That Board has maintained the place ever since and has, as Ladew wished, opened it to thousands of garden-loving visitors: in 1992 alone, reports LTG's Board president Martha Robbins, the garden welcomed more than 25,000 visitors from 40 countries.

An unwelcome visitor

About four years ago, however, a most unwelcome visitor appeared: the hemlock wooly adelgid. This native of Japan, as reporter Mike Klingaman colorfully wrote in a front-page story for the October 4, 1993, *Baltimore Sun*, "attacks with a one-two punch that is half vampire, half viper: The bug sucks the trees' sap while injecting a lethal spittle." That punch is killingly effective, too, because once the adelgid appears, its unfortunate host generally dies within four years.

The tiny insect — four full-grown adelgid can fit onto the head of a pin — is airborne. One adult and up to 300 eggs are coated in white casings that resemble snow, and blown by breezes, the "snow" eventually lands on something it likes — e.g. the needles of a hemlock. Its lethal cargo starts to work sucking and spitting.

The adelgid arrived on the west coast of

The adelgid arrived on the west coast of America decades ago but, not finding the vegetation there to its liking, spread slowly. Once it blew farther east, however, it discovered thousands of square miles of hemlock forests — an adelgid Promised Land — and immediately began rapidly and ravenously destroying, perhaps, millions of acres of forest from Quebec's Laurentian Shield to the Great Smokies, including three-quarters of the hemlocks that once graced the Shenandoah National Forest.

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The inexorable adelgid alone would be bad enough, but Ladew's hemlocks are proving especially vulnerable to any exotic parasite, for they have been stressed and weakened by the 60 years of heavy pruning necessary to maintain their ornamental shapes. In Ladew's defense, Board members are quick to point out that he knew that hemlocks weren't ideal for topiary but he felt forced to choose them since he was middle-aged when he began his garden and wanted something quick-growing enough to mature while he was still alive. Nor was Ladew the only person to shear hemlocks heavily; the truly global nature of the problem is underscored by the condition of the hemlocks that grace Japan's famed temple gardens: entomologist Dr. Mark McClure of the Connecticut Agricultural Experiment Station (and perhaps the world authority on the adelgid) has pointed out that while most Japanese hemlocks have developed a resistance to the seemingly indomitable adelgid after thousands of years of coexisting with it, the temple gardens' bonsaied hemlocks historically die young due to "the stresses resulting from continual shearing."

Hathaway and Caron, indomitable forces themselves, may yet best the adelgid in Maryland. At least they and the Ladew Board will give it a good fight. Fully aware of the seriousness of the problem, in the spring of 1993 the Board decided to look for outside help and hired arborist Barbara Paca. An impressive scholar and author

(she holds an MFA from Princeton, was a Mellon Fellow at the Huntington Library, and the Brooklyn Botanic Gardens has published her work on gardening for children) Paca also brought vast and varied fieldwork to the adelgid campaign for she's studied and documented gardens from Poland to Rome and from Ireland to Annapolis, where she helped the late St. Clair Wright restore the William Paca Garden. (Horticulture is no recent fancy to Barbara Paca's family for William, her great-great-grandfather, created the Annapolis garden in the 1760s.)

Paca set to work in June. She discovered, as everyone had feared, that most of the Ladew hemlocks did show traces of adelgid infestation and that the "clean" plants had indeed, in her words, been weakened by "the gardener's shears" as well as by "long periods of drought" and other climatic variables beyond even the resourceful Ladew staff's control. She then discussed her findings with entomologists and fellow arborists throughout the nation and, after thoroughly analyzing the complexities of the problem, devised a double punch strategy of her own: first, replace the most diseased hemlocks and second, nurse the others back to health.

Taking the suggestions in reverse order, to help combat environmentally-caused stress, Paca advised "deep root feeding with an organic biostimulant rich in seaweed and humic acid to promote vigor" and root growth — but NOT, she emphasized, the high nitrogen fertilizers often used to feed ailing trees.

"Giving nitrogen to infested hemlocks is like throwing gasoline on a fire," Paca explained, because nitrogen stimulates new leaf growth and the more the adelgid has to eat the faster it will reproduce. She also encouraged thrice-yearly sprayings of all infected hemlocks with horticultural oil, i.e., in April when the first eggs hatch, in July when the second batch of eggs hatch, and in the fall when the larvae reach maturity. "The trees must be so completely saturated with oil," she sternly advised, "that they look as though they have been submerged in a lake." As a final preventive measure, she urged the staff to lay a three-inch hardwood mulch around all remaining plants, carefully keeping it away from the trunks of the trees.

The phrase "all remaining plants" leads to what may be Paca's most controversial recommendation, namely mercy-killing those hemlocks deemed beyond salvation

"Giving nitrogen to infested hemlocks is like throwing gasoline on a fire," Paca explained, because nitrogen stimulates new leaf growth and the more the adelgid has to eat the faster it will reproduce.

the subject, *Garden Craftsmanship in Yew and Box* (E. Benn, London, England, 1925), which praised yew for looking fine after pruning, not becoming scraggly over the years, and being of relatively quick growth;

London-based landscape architect Elizabeth Banks agreed with the choice of yew and some Board members pointed out that Ladew himself had used *Taxus cuspidata* 'Densiformis' and *T.c.* 'Erecta Hillii' in the separate topiary "sculpture garden" he crafted about half-way along the hemlock axis.



photo by Fritz Whitman



photo by Christopher Weeks



photo by Christopher Weeks

Left: Workmen shearing Ladew's hemlocks in the 1980s. If left to grow naturally, hemlocks can soar to 120 feet; shearing them to 15 ft. as they did at Ladew, stresses the plants and makes them susceptible to disease. **Top right:** Barbara "Bunny" Hathaway (right) and Barbara Paca inspect some of Ladew's hemlocks for signs of adelgid infestation in July 1993. **Bottom right:** Adelgid-infested hemlocks quickly lose leaves and limbs as this 1993 detail of the Ladew hedges suggests.



Top: In November 1993 100 yards of adelgid-ruined hemlocks were removed and replaced with six dozen small healthy shrubs of *Taxus x media* 'Hatfieldii.' **Bottom:** The *Taxus* shrubs, tiny on the horizon, now define the distant northern edge of the Great Bowl.

Still, there was a concern that replacing hemlock with yew could be a case of out of the frying pan, into the fire. Wayne Cahill of the New York Botanic Gardens and his colleague Dr. Craig Hibbern (who also studied yew at the Arnold Arboretum), for example, warned Paca that most varieties of *Taxus* in eastern North America have their own severe problems brought on by such diverse and daunting factors as air pollution, contaminated soil, and global changes in climate.

By last summer the Ladew Board was nearing despair until, in a round-table discussion, members of the Garden Com-

mittee suggested using *Taxus x media* 'Hatfieldii,' since that cultivar has, so far, proven especially pest- and disease-resistant. The Board hired a contractor to remove roughly 200 yards of dying, infected hemlock, revamp the drainage system, and then, in late November, plant approximately six dozen small, healthy 'Hatfieldii' yews. ("Small" — meaning 24" to 36" — being the operative word since all sources agreed that taller specimens don't transplant well due to damage sustained from past droughts.) It all made for a nervous holiday season and Board members braced themselves for a visual shock; but, to

everyone's great surprise, the young yews look just fine and, as an added bonus, for the first time in 40 years the room gardens behind the former hemlock hedge are being bathed in sunlight.

Lessons for the home gardener

Finally, ever-conscious of the need to be helpful to the home gardener who has to cope with two hemlocks, not 200 yards of them, members of the Ladew Board have worked to reduce all these complex findings to the following four cardinal points:

1) Each season carefully check all hemlocks for telltale flakes of "snow."

2) Feed ALL hemlocks yearly with a low nitrogen biostimulant; the Ladew staff have had good results with the product "Roots."

3) Ruthlessly replace "lost" hemlocks, but replace them with other kinds of plants to avoid a monoculture.

4) Then sit back, recall Russell Page's thoughts about gardening being an expression of faith and an embodiment of hope, and keep an eye out for the next exotic pest that will surely come along.

Can You Help?

The Ladew Topiary Gardens Board is interested in recording what others are doing to combat the adelgid; and, to help pay for this fall's expensive but necessary work it has also launched its first ever public fundraising campaign, The Ladew Maryland Endowment Fund, nicknamed "A Hedge for the Future." Any and all contributions to the campaign — and any and all information about the adelgid — will be gratefully received:

The Ladew Topiary Gardens
3535 Jarrettsville Pike
Monkton, MD 21111

Christopher Weeks has been gardening in Baltimore's Bolton Hill neighborhood since 1981. The author and co-author of several books on American architecture and gardening (including *Clues to American Garden Styles*, Starrhill Press, 3rd edition, 1991), he also writes frequently for such periodicals as *American Heritage*, *Country Life*, *Metropolis*, and the *Baltimore Sun*.

Salvias Extend Color Through the Seasons



by Betty Sparks

The Hardy Plant Society Mid-Atlantic Group formed a 35-member team to study salvias. Their research offers hard-to-come-by information about these colorful plants in time to buy them at spring plant society sales.

My obsession with salvias began when Alma Nelson and I visited Wave Hill, a public garden in New York City in September, 1991. Among the many fascinating plants to see there the ones that kept pulling us back were the ornamental salvias, which were unfamiliar to us. We knew the short, stocky *Salvia splendens* sold in grocery stores and nurseries and used in such abundance in commercial landscaping because they bloom all summer with little or no maintenance. The salvias at Wave Hill were tall and billowy, with blooms in rich purples, cobalt blues, and garnet red. Shorter ones exhibited blooms in all the colors of the rainbow. We were enthralled. We came home craving those plants.

The following week I visited Joanna Reed's garden, Longview Farm in Malvern, Pa., on a Pennsylvania Horticultural Society-sponsored trip. Joanna is a member (and former president) of the Philadelphia Unit of the Herb Society of America, which was at that time conducting a study of salvias. Her garden exploded with many different species and cultivars. Joanna invited us to "take cuttings." She added, "Frost is coming soon and they will be cut down." She told us how to root the cuttings and winter them over.

I followed Joanna's advice and was especially happy to see her article on salvias in the January, 1992 issue of the *Green Scene*, p. 16. I lost more cuttings than I was able to keep that first winter but

Salvia 'Purple Majesty' bloomed from August until November in 1993.

photo by Alma Neas Nelson

Joanna's gifts were the beginning of my collection.

The salvias that I grew in 1992 (*S. van houttii*, *S.* 'Purple Majesty,' *S. greggii* x 'Raspberry Royale,' *S. guaranitica* and *S. leucantha*) were so beautiful that I started a determined hunt for others. In 1993, Alma and I placed orders with six different mail-order nurseries in our quest for these not-yet-readily-available-in-the-trade plants. Soon thereafter the Hardy Plant Society, Mid-Atlantic Group also formed a group (35 strong, including Alma and myself) to study salvias.

Although most of us think of salvias, which are members of the mint family, *Labiatae*, as plants for full sun, we found many will also grow in shade. Some are tall, for the back of the border; others are short. Salvias native to the Mediterranean region and to desert climates elsewhere tend to have gray foliage. They need full sun, good drainage, and in some cases, alkaline soil, to do their best. Many salvias are native to the United States, Mexico, Central and South America. Salvias native to tropical regions, with green foliage, may require richer soil with a greater humus content, and more moisture, for best growth. While many of these ornamental salvias will bloom before frost in the Delaware Valley, some of those whose bloom onset is triggered by shorter days (or longer nights, to be more exact), will not.

Some salvias grow as hardy perennials in our area. Most of the salvias that I refer to here, however, are called "tender" perennials. They would be perennial in their native clime but winter temperatures in the Delaware Valley are too harsh for their roots to survive. To have the plant in the garden the following year, we must dig the plant up, pot it, and winter it over in a greenhouse or bring it inside to grow under fluorescent lights until spring temperatures are warm enough to move it outside again. Another alternative: take stem cuttings of new, non-woody growth in late summer and over winter them inside to insure stock for the following summer.

What we have found out about these plants over the past two years follows. (See chart on page 12 for details about plant height and width at maturity, color of foliage and of bloom, and time of bloom.)

First-hand reports from gardeners

Salvia azurea, *S. officinalis*, *S. pratensis*, and *S. uliginosa*, Joanna Reed's favorites, were discussed in her *Green Scene* article along with several others not discussed here. Nancy Ondra, associate editor of gardening books at Rodale Press, loves

S. transylvanica. "With a name like that, how could I pass it up?!", she asks. She also grows it because it makes a good show, with deep indigo-blue flowers throughout June and most of July. This salvia, a clump-former, will self-sow.

Nancy also likes *S. verticillata*, which has silver-cast leaves and an upright form. The blooms are in lavender whorls around the flower stem. She grew both of these from seed, from Thompson and Morgan. *S. verticillata* may be seen growing in front of the Scott Arboretum office on the Swarthmore College campus.

Paula Kaplan, who gardens in Abington, was given seeds of *S. jurisicii* from an Oregon gardening friend several years ago. For her, this salvia sports lavender blooms from late June until early August.

In his book *Rock Gardening* (Bonanza Books, New York, 1968), the late H. Lincoln Foster recommends *S. jurisicii* for the large rock garden. *S. koyame*, the Japanese fall-blooming yellow sage, can also be seen on the Swarthmore campus, behind the Scott Arboretum office. A woodland plant, it blooms from late summer into fall.

Mike Slater, an avid rock gardener and current vice-chair of the Delaware Valley chapter of the American Rock Garden Society, suggests *S. dorrii incana* as a good candidate for the larger rock garden. He grows many of his plants from seed and recommends the seed sources (1-3) listed at the end of this article. He also recommends *S. caespitosa* for the rock garden, but we could not find a source. Mike thinks he may have gotten the seed from the American Rock Garden Society seed list. If you find this plant, try it. Mike likes salvias because they tolerate heat and drought and have few disease or insect problems, which makes them good candidates for the garden to survive the summers we've experienced over the past few years. Two other possibilities for the rock garden are *S. lyciodes*, which has thyme-like gray-green foliage with vibrant sky-blue blooms in summer and *S. lyciodes* x *greggii*, which has deep purple blooms.

Bloom sequence of the tender salvias in the Delaware Valley

June until frost:

Among the many cultivars of *S. greggii*, few are reported to be hardy in Zone 6. The rest appear to be hardy to Zone 7 and may winter over here if the winter is mild. These plants are shorter, with small leaves. The blooms come in shades of yellow, peach, pink, cherry, crimson, plum, purple, raspberry, and white. There are probably more

choice to come through the active collecting expeditions and hybridizing programs now being conducted. They do well in the front of the border.

Some cultivars of *S. greggii*, such as 'Cherry Chief' and 'Cienego de Oro' have a more upright habit of growth and would make good middle-of-the-border plants. Many of the *greggii* will be available at the plant sales. Try them in different parts of the garden to determine their best placement. *S. greggii* x *microphylla* 'Red Velvet' was grown by Hutchie Cummin in the summer of 1993 and was one of her favorites, for its deep crimson color and long blooming period. Cummin and Aldys Davis propagate most of the salvias sold at the Philadelphia Unit of the Herb Society of America plant sale in May.

***S. buchananii* grows in shade as well as sun. It's my personal favorite, for its dainty, glossy, dark-green foliage and velvet-textured fuchsia blossoms.**

S. 'Indigo Spires,' an amazing plant, begins to produce deep violet-blue bloom spikes in June. As the summer wears on, more spikes are produced and the first spikes just keep getting longer. By mid-September, some of the spikes are two feet long.

S. miniata, also known as Belize, is one of my favorite salvias. It grows well in shade, according to collector and hybridizer Richard Dufresne, or in morning sun and has glossy apple-green leaves whose edges may be tinged with burgundy. Hummingbirds love the scarlet blooms. Another of my favorites is *S. penstemonoides*, a Texas native. Its blooms were a deep rose-mauve from June until late September and looked great with clear pink and/or deep blue flowers.

July until frost:

S. buchananii grows in shade as well as sun. It's my personal favorite, for its dainty, glossy, dark-green foliage and velvet-textured fuchsia blossoms. The scarlet *S. blepharophylla* also grows well in shade, having deep green, glossy foliage. It does not seem to exceed two feet in height and makes a good front-of-the-border plant. *S. chamaedryoides* has dainty, silver-grey leaves and is covered with vibrant blue blooms from July until frost, if given good drainage. It should be suitable for rock gardens.

S. coahuilensis, a delicate-looking plant, with small green leaves and deep, blue-



Top left: *Salvia van houttii* is a favorite of many salvia lovers. It grows to 4 feet tall by 4 feet wide in a season and is covered with bloom from August until frost. **Bottom left:** The color range of the *Salvia greggii* keeps expanding, mostly due to Richard Dufresne's efforts. Here is one of the yellows that he has helped to introduce: 'Cienega de Oro.' **Top right:** This close-up view of *Salvia guaranitica* 'Costa Rica,' also known as Black and Blue, shows where the name comes from. Note the black calyces, with the blue-violet corollas. With an inflorescence of close to 12 inches, this plant is a "knock-out" and well worth the wait. **Bottom right:** *Salvia miniata*, a favorite of hummingbirds, will bloom in part-shade or sun, from June until frost.

violet flowers, is great in containers. While many salvias may be seen at Chanticleer, the former Rosengarten estate in Wayne, now open to the public, its executive director Chris Woods especially likes *S. discolor*. He takes fresh cuttings from stock plants in February and March and by July, they are in full bloom. He prefers to grow this salvia in containers for the way it tumbles about. The contrast of the green leaf surface with the white leaf underside, white stems and the deep blue, almost black blossoms can be stunning.

S. guaranitica is a favorite of Jack Potter,

former curator at the Scott Arboretum, who now writes and gardens in New York. Jack says that this salvia, with deep blue blossoms, grows well in part shade and may be hardy in the Delaware Valley if grown in a protected spot and mulched deeply. He has found it to be one of the first to be visited by hummingbirds when they come to his garden. *S. guaranitica* 'Argentina Skies' has pale blue flowers. It was introduced by Charles Cresson of Swarthmore, Pa. Patrick O'Farrell, an avid plant collector who lived in Buenos Aires, discovered a pale blue form of *Salvia guaranitica*

growing in the wild in 1987 and collected seed from it. He sent some of the seed to Cresson who made selections from the plants that resulted. In conjunction with Montrose Nursery, Cresson introduced *S. 'Argentina Skies'* to the gardening world. Charles says that both forms of *S. guaranitica* in his garden are quite similar. Both have rhizomatous roots and form tubers. Both forms get larger each year that they are left in the ground and Charles is concerned about space. So each fall, after frost has cut down the top-growth, he digs up the root-mass, splits the clump with a spade, tears off the rhizomes along the outer edge, replants the crown, and mulches well. For the past five years, this has worked and the following spring top-growth has reappeared and the plants have grown well. From second- and third-year root stock, Charles cuts the top-growth back severely several times, before July. These *S. guaranitica* still get to be six feet tall and bloom profusely from July until frost. He cautions that they do have to be staked.

Salvia sinaloensis, a gem of a plant, grows only 12 to 15 inches tall by 15 inches wide. The foliage is green, washed over with burgundy. It would be a treasure if it never bloomed but it does, with deep indigo-blue flowers, from early July until September.

August until frost:

S. chiapensis will grow in part shade and has glossy green foliage, with fuchsia blooms. *S. 'Purple Majesty'* is one of the salvias that I saw at Wave Hill. It has wonderful, deep royal purple blooms but has a somewhat coarse texture and is not a specimen plant. It looks better planted in a border woven in among other plants. *S. urica* is covered from August until frost with small, deep blue-violet blooms. It seems to expand to fill whatever space is available, growing a little over four feet tall and between three and four feet wide. *S. van houttii* seems to be at the top of everyone's list. It literally drips in long, garnet-red blossoms from early August until frost. *S. van houttii* will take a fair amount of shade, as long as it gets a few hours of direct sunlight.

September until frost:

S. confertiflora can be seen growing in pots at Chanticleer. When grown in a protected spot with no artificial light at night, its rusty-orange blossoms (some say "chocolate") can be enjoyed from mid-September until frost. The flower spike exceeds seven inches and makes a good

show. The foliage is also an asset. *S. oppositiflora* begins to bloom in late August-early September with salmon-colored blossoms.

October until frost:

S. guaranitica 'Costa Rica,' also known as Black and Blue or Late-Blooming Giant,

Jack Potter says, "It takes strength of spirit to try to extend the season at the other end." He contends that these plants have more value, just for the uncertainty involved.

is a stunning plant. It can reach six to seven feet in height. It blooms from late September-early October until frost. The flower spike is about 12 inches long. The flowers are a deep blue-violet with black, showy calyces, hence the name. A cultivar with chartreuse and green variegated leaves called 'Omaha' is being grown at both Chanticleer and the Scott Arboretum. Andrew Bunting, curator at the Scott Arboretum, especially recommends *S. involucrata*. They begin to bloom the first of October and continue to bloom through a few of the lighter frosts.

S. leucantha begin to bloom in late September for some, but early October for most. There are now two forms of *S. leucantha* available, both striking. Both have velvety red-violet calyces, showy for at least two weeks before the actual corollas appear. One form has white corollas, the other has purple or red-violet corollas.

In a race with frost:

These are the plants that Jack Potter calls "gamblers' plants." To Jack, it makes absolute sense to try to extend the season of bloom in the fall. Many gardeners think nothing of planting spring-blooming magnolias, whose blossoms may be cut down by late frosts two years out of three. Jack says, "It takes strength of spirit to try to extend the season at the other end." He contends that these plants have more value, just for the uncertainty involved. *S. mexicana* and *S. mexicana minor* had buds for most of us but only made it into bloom for a few, before being cut down by frost in mid-November. Also cut down in bud, but not bloom, was *S. madrensis*. Some of the late-blooming salvias may be worth growing for characteristics other than bloom. *S. dorisiana* will not bloom in the garden before frost, but its foliage's scent makes it worth growing. *S. madrensis* and *S. karwinskii* are valuable as garden plants for the

Richard Dufresne:

In June 1993, Joanne Walkovic, one of the cofounders of the Hardy Plant Society, Mid-Atlantic Group, invited Richard Dufresne to Philadelphia to speak. Dufresne introduced to the trade the plants that are discussed here.

For the past 19 years, he has spent most of his time, when not working as a research chemist at Lorillard, Inc. in Greensboro, North Carolina, collecting, growing and hybridizing salvias. He has worked zealously to get these plants "out" to the gardening public and has formed an extensive network of nursery-people, horticulturists at botanic gardens, and plant collectors with the same commitment. He hopes that by working together, enough data on growth habits, bloom sequence, cultural characteristics, and hardiness ranges can be assembled to publish a book on the genus. The Hardy Plant Society Salvia Study Group is collaborating with him, collecting data from the Delaware Valley area to be incorporated into his work.

Many of Dufresne's plants were available for sale when he came in June, 1993. By the time he left, members of the HPS study group had amassed a collection of over 100 different species or cultivars. He will be in the area again this year with more unusual salvias to sell. Look for him at the Baltimore Herb Festival, May 28, 1994 (see p. 11 for details).

architectural quality of their foliage. *S. karwinskii* may reach 4-6 feet in height and has large, gray, felt-like leaves; *S. madrensis* may attain the same height, but with large, green leaves. *S. purpurea* grows in one season to 5 ft. in height by 4 ft. wide, with golden-green leaves and purple-tinged stems. It will not bloom before frost in the Delaware Valley, but it was a wonderful foil for other plants in the garden for the whole growing season.

Seed germination

Joanne Walkovic, who gardens in Media, Pa., is primarily interested in testing new and unusual plants, both for "garden-worthiness" and for cold-hardiness here in the Delaware Valley. If she likes the color of the flower, she will grow the plant whether hardy or not. For many years, she has been bringing back salvias from England that are not available in the United



photos by Alma Neas Nelson

Salvia buchananii is a treasure. It flowers well in light shade or in sun.

States or ordering salvia seed from the seed exchange of the Hardy Plant Society of Great Britain. She says that salvia seed are easy to germinate. She uses Fafard mix, but if that is not available, recommends Pro-Mix. She uses light and bottom-heat of about 68°-70°F to induce germination, which usually occurs within two weeks. She then transplants the seedlings into individual pots to grow on under lights until the end of April, when she moves them outside into the cold frame to harden off. They go directly into the garden around May 15th.

Vegetative propagation

Although stem cuttings may be taken up until just before frost, the best time seems to be from mid- to late August. Plants are still in active growth and will root within two weeks. Cuttings taken at this time do not need rooting hormone to help induce root growth.

I use sweater boxes with a clear top, filled half-way with a mixture of coarse builders' sand and perlite or Pro-Mix and perlite as a rooting medium. I water the mix first, then take cuttings, about three nodes long, from the newest (not woody) growth on the plant I wish to propagate. I strip the leaves from the bottom two nodes. When placing the cutting into the rooting medium, I bury the bottom node in the medium with



Salvia confertiflora just beginning to show color in late September, at the Scott Arboretum. This is a great plant for the "hot" border or for larger containers.

the second stripped node above the medium surface, leaving only the top two leaves on the cutting to transpire. If the cuttings are taken in mid-August, I place them directly in the sand/perlite mixture, making sure to pack firmly the rooting medium around the cuttings' stems; I add a little more water to the base of each cutting. Then with the clear cover on the sweater box, which I place it under a fluorescent light under a kitchen cabinet. Usually, within a week I find roots when I dig a cutting out with a spoon; I wait another week to pot-up the cutting in growth medium to allow a good root mass to form.

If, however, I have waited until October to take cuttings, I first dip each cutting in a fungicide to prevent a fungus infection while the cuttings are sitting for one to two months in a warm and humid environment. In addition to the fungicide I treat each cutting with a rooting hormone. The same procedure as above is followed otherwise.

* * *

Last fall, as Hutchie and I were on our way to the greenhouse where she and Aldys are keeping the salvia cuttings for the Philadelphia Unit's Herb Society of America spring sale, she said that she used to dread the approach of fall and the end of the gardening season. Now her garden is filled with bloom all through the fall, even

through the first, lighter frosts. Every day she looks forward to something new happening. That's how many of us have come to feel about salvias.

The list of sources should be sufficient for you to find every salvia that I have discussed. I especially recommend the plant society sales: the Hardy Plant Society sale, the Herb Society, Philadelphia Unit plant

sale (see Plant Society story on page 28), and a trip to the Baltimore Herb Festival to see Richard Dufresne.

If you want more information about any of these plants, write to me at 213 Cedarbrook Road, Ardmore, PA 19003-1701. I will answer questions I can or put you in touch with someone else who may have the information you need.

continued

Sources

Pick-up Only. (No mail order)

Code

- AT Atlock Flower Farm
Weston Canal Road
Somerset, NJ 08873
(908) 356-3373
(call for directions)
- MA Martin's Greenhouse
1516 Division Highway
Narvon, PA 17555
(717) 354-7546
(5 miles west of Honey Brook
on Hwy. 322)

Area Plant Sales

- HP Hardy Plant Society
May 14, 1994
see Plant Society listing, this issue
- HE Herb Society of America,
Philadelphia Unit
May 12, 1994
see Plant Society listing, this issue
- RD Richard Dufresne at the
Baltimore Herb Festival
Leakin Park
4921 Windsor Mill Road
Baltimore, MD
May 28, 1994
10 am - 5 pm
call (610) 896-9360 for
directions

Mail Order Plants/Seeds

- CC Canyon Creek Nursery
3527 Dry Creek Road
Oroville, CA 95965
(916) 533-2166
catalog \$1.00
- CP Companion Plants
7247 N. Coolville Ridge Rd.
Athens, OH 45701
(614) 592-4643
catalog \$2.00

Code Mail Order (cont'd.)

- LO Logee's Greenhouses
141 North Street
Danielson, CT 06239
(203) 774-8038
catalog \$3.00
- PD Plant Delights Nursery
9241 Sauls Road
Raleigh, NC 27603
(919) 772-4794
catalog \$2.00
- SM Sandy Mush Herb Nursery
Rt. 2, Surret Cove Road
Leicester, NC 28748
(704) 683-2014
catalog/handbook \$4.00
- WS Well-Sweep Herb Farm
317 Mt. Bethel Rd.
Port Murray, NJ 07865
(908) 852-5390
catalog \$2.00
- WFF White Flower Farm
Litchfield, CT 06759-0050
(203) 496-9600
1st catalog free
- YD Yucca Do Nursery
P.O. Box 655
Waller, TX 77484
catalog \$2.00

Seed Only

- AL Alplains
32315 Pine Crest Court
Kiowa, CO 80117
- NN Northwest Native Seed
915 Davis Place S.
Seattle, WA 98144
- RM Rocky Mountain Rare Plants
P.O. Box 200483
Denver, CO 80220-0483
- TM Thompson and Morgan
P.O. Box 1308
Jackson, NJ 08527-0308
(908) 363-2225

SALVIAS HARDY TO ZONE 6*

Botanical Name (Common Name)	Flower	Foliage	Cultural Needs**	Comments	Sources
<i>Salvia argentea</i> (Silver Sage)	White spikes to 2 feet, in early summer.	Large, hairy silver leaves to 8" long. Clump = 6"-8" in ht. x 1½' wide.	Full sun, good drainage, lime, humus.	Biennial. Front of border; rock wall.	CP, MA, RD, WS, WFF
<i>Salvia dorrii</i> var. <i>incana</i> (syn. <i>S. carnosa</i>)	Blue-violet, showy, in summer.	18" to 24" in ht.	Full sun, good drainage.	Native plant. For larger rock garden.	NN
<i>Salvia glutinosa</i> (Jupiter's distaff)	Yellow with brown flecks in late summer.	To 3' in ht. Large, broad green leaves.	Part shade to part sun. Lime. Will tolerate acid soil.	Suitable for naturalizing. Self-sows.	CP, RD
<i>Salvia jurisicii</i>	Violet-blue in summer.	To 12" in ht. Deeply lobed, gray.	Full sun. Tolerates wide range of soils.	Large rock garden, front-of-the-border. Self-sows.	AL, RD, RM, WFF
<i>Salvia koyame</i> (Japanese yellow sage)	Yellow, in late summer, fall.	Rich green foliage, somewhat coarse in texture.	Woodland plant.	For shady borders, woodland areas. Stoloniferous.	PD, RD, YD
<i>Salvia lyciodes</i> (Canyon sage)	Vibrant, sky-blue flowers in summer.	Low, compact, thyme-like gray-green foliage.	Full sun. Good drainage.	Front-of-the-border; rock garden.	RD, SM, YD
<i>Salvia lyciodes</i> x <i>greggii</i>	Deep purple, summer into fall.	Low, mounding.	Sun to light shade.	For front-of-the-border; rock garden.	RD, YD
<i>Salvia sclarea</i> var. 'Turkestanica'	Light pink (turning mauve) spike to 2½ ft. in summer.	Basal. Coarse texture. Very large, gray foliage.	Full sun to light shade. Drought-tolerant. Thrives in heavy soils.	Biennial. Massive in effect of bloom.	CP, SM, T&M, WS
<i>Salvia transylvanica</i>	Royal blue spikes, to 2½ ft. in summer.	Medium green, coarse texture to 1 ft. in ht.	Full sun to part shade. Good garden soil.	Clump former.	AL, TM
<i>Salvia verticillata</i>	Lavender, summer.	Basal rosette. Somewhat coarse in texture.	Sun to part shade. Garden loam.	Good for naturalizing.	TM

SALVIAS "TENDER" IN ZONE 6*

<i>Salvia blepharophylla</i>	Scarlet, July until frost.	2½ ft. tall by 2½ ft. wide. Medium to deep green, shiny leaves.	Sun to part shade. Good garden soil with extra humus.	Front-of-the-border. Attractive foliage. Rhizomatous.	CC, RD, SM, YD
<i>Salvia buechananii</i>	Velvet-like fuchsia blooms, July until frost.	Plant 18" tall x 18" wide. Dark green, shiny, leather-like small leaves.	Shade to sun. Good drainage. Garden loam with extra humus.	Front of border or container.	RD, SM, YD
<i>Salvia chamaedryoides</i> (Germander sage)	Vibrant blue, July until frost.	Ht. 15"-24" by 15"-24" wide. Leaves are small, silver-gray.	Sun to part shade. Lime. Drainage.	Rock garden or container.	AT, CC, LO, PD, RD, SM, YD
<i>Salvia chiapensis</i> (Chiapas sage)	Fuchsia, August through October.	Ht. 2'-3' by 2 ft. wide. Small, deep-green leaves.	Part shade to part sun. Humus.	Front-of-the-border or container.	RD, SM
<i>Salvia coahuilensis</i>	Deep blue-violet, from July through October.	To 2 ft. high by 18"-24" wide. Small green leaves.	Sun to part shade. Good garden soil with extra humus. Drainage.	Rock garden or container.	RD, SM
<i>Salvia coccinea</i> and cultivars	Scarlet; crimson, "Bicolor"-shrimp and peach; white. From June until frost.	Plants will be from 18"-36" or more in height & width. Green foliage.	Sun to light shade. Good garden soil with extra humus.	Borders or in containers. May. Self-sow.	CC, CP, RD, SM, WS, YD
<i>Salvia confertiflora</i>	Copper-orange, from September until frost.	To 5 ft. in ht. x 4 ft. in width. Leaves are large, green.	Drainage. Full sun to lt. shade. Good garden soil with humus.	Middle to back of border or container.	AT, CC, CP, RD, YD
<i>Salvia discolor</i> (Andean silver-leaf sage)	Deep purple, almost black blooms from July until frost.	Green top to leaf with white underside and white stem. 3'-4' tall x 2'-3' wide.	Sun. good garden soil with extra humus.	Container plant.	AT, CC, CP, LO, RD, SM, YD
<i>Salvia farinacea</i> and cultivars	Deep blue-violet, or white, June until frost.	18"-36" in ht., depending upon cultivar.	Full sun. Good garden soil.	Great in borders to "fill in" gaps. Looks good with any color scheme.	Readily available at local nurseries.
<i>Salvia greggii</i> 'Furman's Red,' F. alba, F. rosea, x 'Cherry Chief' Possibly hardy in Zone 6	Crimson, white, rose or cherry red, June until frost.	Small green leaves. Plant may grow 2½ to 3 ft. in ht. & width	Sun to part shade. Loam with extra humus. Lime. Drainage.	Drought-tolerant. May self-sow.	PD, RD, SM, WS

<i>Salvia greggii</i> , other cultivars	Yellow, peach, cherry, pink, raspberry, plum and more.	Small, green leaves. Plant 12"-24" in ht. x 12"-24" in width.	Sun to part shade. Loam with humus.	Many are Richard Dufresne introductions.	AT, LO, PD, MA, RD, SM, WS, YD
<i>Salvia guaranitica</i> Possibly hardy in Zone 6.	Cobalt blue, July until frost.	4 to 6 ft. in ht. by 3-4 ft. in width.	Part shade to sun. Good garden soil with added humus.	A hummingbird favorite.	AT, CC, LO, RD, SM, WS, YD
'Argentina Skies'	Light blue, July until frost.	Same as above.	Same as above.	Introduced by Charles Cresson.	AT, PD, RD
'Costa Rica' (black and blue late-blooming giant)	Deep, vibrant blue with black calyces; from October until frost.	6 to 7 ft. tall x 2-3 ft. wide.	Same as above.	Worth the wait. A "knock-out." Needs support.	AT, RD
<i>Salvia</i> 'Indigo Spire' (<i>S. farinacea</i> x <i>longispicata</i>)	Deep blue-violet flowers, June until frost.	4 ft. high by 5 ft. wide. Green foliage.	Sun to part shade. Good garden soil with added humus.	Flowering spikes get longer as temperatures get cooler, they flow out horizontally.	AT, CC, CP, LO, PD, SM, RD, WS, YD
<i>Salvia involucrata</i> 'Wave Hill'	Deep rose, 12"-long spikes.	3-5' tall & wide. Med. green leaves.	Part shade to sun; loam with humus.	Stems & petioles flushed rose.	RD, SM, WS, YD, CC, AT, LO
<i>Salvia leucantha</i> (Mexican bush sage) or Emerald sage	Calyces are furry red-violet; Corollas either red-violet or white; late Sept. to frost.	Plant 5' tall x 4' wide w/long, thin lanceolate gray-green leaves.	Full sun to part shade. Loam, humus, lime, drainage.	A general favorite. Flowers dry well.	AT, CC, CP, LO, PD, RD, SM, WS, MA
<i>Salvia miniata</i> (Belize)	Scarlet blooms, June until frost.	Upright habit: 3' tall x 3 ft. wide. Apple-green, glossy foliage.	Part shade to sun. Loam with added humus.	Front-of-the-border. No staking necessary.	CP, MA, RD, SM, YD
<i>Salvia oppositiflora</i>	Salmon, September to frost.	Plant: 3 ft. tall x 2½ ft. wide. Green leaves.	Sun to part shade. Loam with humus.	Middle-of-the-border.	RD
<i>Salvia penstemonoides</i> (Big Red Texas Sage)	Rose, June to late Sept.	Deep green basal rosette. Flower stalks to 2½-3 ft.	Sun to part shade. Loam, lime, drainage.	Texas native. Will set seed.	AT, YD
<i>Salvia</i> 'Purple Majesty' (<i>S. guaranitica</i> x <i>gesneraeiflora</i>)	Deep royal purple, from August until frost.	Green, coarse in texture. Plant: 4-5 ft. tall x 3' wide.	Part shade to sun. Loam, humus.	Middle-of-the-border. Not a 'specimen' plant.	AT, CC, CP, LO, RD, SM, WS, YD
<i>Salvia sinaloensis</i>	Indigo blue, early July until Sept.	12" tall x 15" wide; burgundy-washed foliage.	Sun to part shade. Loam with humus.	Rock garden, container.	CC, YD
<i>Salvia urica</i>	Dainty, deep blue-violet, August until frost.	Plant: 4½ ft. tall x 3-3½ ft. wide. Leaves are yellow-green, hairy, sticky stems.	Sun to part shade. Loam with humus.	Needs support.	RD, SM
<i>Salvia Van houttii</i>	Garnet-red, early August until frost.	Plant: 4 ft. tall x 5 ft. wide. Green leaves.	Sun to part shade. Loam, humus.	The favorite of the Hardy Plant Society, Salvia Study Group.	CC, CP, RD, SM, WS, YD

*More salvias are listed on the tables here than appear in the body of the article. The author had to narrow down the salvias she wrote about because space was limited; she thought listing additional plants here would expand salvia possibilities.

**Cultural needs and zone hardiness information was derived from material compiled by Richard Dufresne. All other information was compiled from members of the Hardy Plant Society, Salvia Study Group and refers to the Delaware Valley area.

Where to See Salvias Mentioned in Article

Chanticleer
786 Church Road
Wayne, PA 19087
Open April - October
Wed., Thurs., Fri., Sat.
10:00 am until 3:30 pm

Longview Farm
Bodine Road, Box 76
Malvern, PA 19355
(215) 827-7614
April 15 - October 15
Thurs., Fri., Sat.
noon until dusk
Admission \$5.00
For Salvias, Joanna
Reed says that late
summer is best.

The Scott Arboretum
500 College Avenue
Swarthmore, PA
19081-1397
(610) 328-8025

Wave Hill
675 W. 252nd St.
Bronx, NY 10471
(212) 549-3200

Betty Sparks, an avid digging gardener and plant collector, uses organic gardening techniques wherever possible. She is a third-year student at the Arboretum of the Barnes Foundation. A member of The Gardeners and the Hardy Plant Society, Sparks is also vice-chair for Arrangement Aides for the Pennsylvania Horticultural Society's 1994 Philadelphia Flower Show.

Fooling Mother Nature -

An expert forces daffodils for the Flower Show. You can try it at home.

by Ray Rogers

photos by Walt Fisher



Top: Flower Show Competitive Class exhibitor Susie Ganoë's blue ribbon *Narcissus* 'Flower Record' won the Delaware Valley Daffodil Society ribbon at the 1988 Philadelphia Flower Show. To force her bulbs, Ganoë builds a temporary, surface-level cold frame for her plants' cold storage. She surrounds them with bagged leaves for insulation, covers them with leaves and sprinkles mothballs around to discourage hungry rodents. **Bottom left:** Slumbering champions. Beneath a 12" layer of perlite and a protection screen, here guarded by Pekoe, Flower Show Competitive Class exhibitor Walt Fisher Jr.'s bulb entries spend the winter insulated. The top 2 or 3 inches will freeze, leaving the lower portions around the pots at 35°-42°F. **Bottom right:** The perlite insulation is easy to dig through, even after hard frosts of winter. Fisher begins to remove the pots in February.

For years, while serving as a passer* for the horticulture classes at the Philadelphia Flower Show, I would watch magnificent pots of daffodils being entered at the far end of the Horticult in the bulb classes. By 1990, itching to compete, I decided to jump in and enter a few pots, as well as make entries in other areas of the Horticultural Classes. Two years later, after winning runner-up in the Horticultural Sweepstakes at the 1991 and 1992 Shows, I embarked on my goal to go for the Big One: the 1993 Horticultural Sweepstakes. Part of the plan included daffodils as a major section of my bulb entries, so I prepared 32 pots of daffodils (along with 119 pots of other bulbs) in the fall of 1992.

Entering a blue-ribbon pot of daffodils in March begins with ordering high-quality bulbs the previous summer. I shop around and don't always buy the biggest, most expensive sizes: the cheaper, large single-nosed rounds generally fit better into a pot than do costlier multiple-nosed bulbs, meaning I can squeeze more of them in. In the long run, I think I get more flowers per pot out of the single noses than the multiples, although I usually work with multiple-nosed bulbs because they are easier to find than the singles or are the only size most suppliers offer.

Standard (non-miniature) daffodils go into azalea pots to lend some stability to the tall, sometimes topheavy plants in bloom, and I think the lower profile helps make a better-looking entry. If not specified by the Show schedule, I like to use 8-inch azalea pots because they hold enough bulbs to make a good display. Giant multiple-nosed bulbs often fit better in 10-inch pots, and I do an occasional 10-inch pot of single-nosed bulbs to really make a splash. (Some exhibitors produce even bigger pots for an even more spectacular display, but remember this represents a great many daffodil eggs in one somewhat unpredictable basket.) The miniature daffodils can go into azalea pots, but I prefer to use 4-inch or 6-inch standard pots: the minis aren't as topheavy as the taller cultivars can be, and the bulbs have more soil beneath them to root into in the taller standard pot.

How many bulbs do I put into a pot? The answer is as many as will fit in two layers, ignoring the maxim of "Don't let forced bulbs touch each other." This maxim might

*Passers inspect the plants entered in the Horticultural section of the Philadelphia Flower Show for torn leaves, faded blooms, diseases or pests that could spread to neighboring plants; they verify plant names and see that the exhibitor has adhered to the guidelines in Exhibitors' Schedule.

Ray Rogers 1993 Philadelphia Flower Show Horticultural Sweepstakes Winner

After two years as the runner-up, Ray Rogers won the Pennsylvania Horticultural Society Horticultural Sweepstakes (for accumulating the greatest number of points in the Horticultural classes) at the 1993 Philadelphia Flower Show.

Rogers won 120 ribbons for his 175 plant entries: 27 blue ribbons, 33 second place, 34 third place and 26 honorable mentions. Among these, he received The Delaware Valley Daffodil Society rosette for the outstanding blue ribbon entry in the narcissus class for his *Narcissus* 'Peeping Tom' and nine blues in the narcissus classes.

Ray Rogers, who lives in New Brunswick, New Jersey, is garden editor at Dorling Kindersley, Inc. in Manhattan. This year will be Rogers' fifth year as an exhibitor in the Horticultural Classes at the Philadelphia Flower Show. Look for his entries.

apply to other bulbs, but I have never had any problems with crowding daffodils.

I try to pot all my daffodils before the beginning of November, starting with those that bloom later in the normal, outdoor, in-ground season. That means I pot up the late miniature 'Hawera' first, and finish up with the early 'Tete a Tete,' doing the standard trumpets and large-cups in between. I sometimes pot up one cultivar over the course of about 10 days, which corresponds to the length of the Show. Come February, the pots planted first will be the first ones to begin the forcing program. I've also potted all of one cultivar in one day, remembering to stagger the starting times the following February. I suspect both methods work equally well, provided the bulbs receive the average minimum 15-week cold period, which is the time they spend outdoors before being brought inside for forcing.

Soil mix

There is no one best soil mix to use for daffodils; ask 10 exhibitors at the Show and you will probably get 10 different favorite mixes. I don't use the same mix every year, but all of the mixes I have used are well drained and can hold enough water to prevent the newly rooted bulbs from drying out if I can't get to the bulbs for a few

weeks. Any of the peat-and-perlite-based commercial mixes are acceptable except for the very fine seed mixes. Adding a good-sized handful of coarse sand per 8-inch pot's worth of mix adds a bit more weight and stability, but I don't know if it makes any cultural difference. A similar amount of good garden soil (preferably sterilized) can also help but is definitely not essential.

I begin planting up a pot by covering the drainage hole with a square of window screening, a wad of coarse sphagnum moss, or a curved piece of broken pot. Then I add a few inches of the chosen soil mix, and press it down gently but firmly. The total amount of soil mix to add before starting to put in the bulbs depends on the size of the bulbs and the height of the pot: when finished, the tips of standard bulbs stick out an inch or two (sometimes unavoidably more) above the rim of the pot, and miniatures normally barely protrude. Because I always force daffodils in double layers, I put in the first layer tentatively as a guide, then test a few of the second layer on the shoulders of the first layer. If their tips project the prescribed distance above the rim of the pot, then I remove the few in the second layer, add enough soil mix to cover about two-thirds of the height of the first layer, press the soil down between every bulb and between the bulbs and the pot, and then put in the second layer. Adding and firming the top layer of soil mix, allowing enough space at the top for watering (1/2 inch is ideal), finishes the pot. Well, not quite: a plastic label with the cultivar name or some sort of code number pushed well into the pot, with the top still visible, completes the job. I also keep a master calendar of potting dates, cultivars, and code numbers.

I never use any fertilizer when forcing daffodils. The bulbs contain all the materials and metabolic capabilities they need to get the job done given the right levels of water, light, and temperature. If you plan to keep the bulbs for growing on and planting out, you should begin a soluble fertilizer program as the flowers fade, or add some organic fertilizer to the potting mix. (After the Show, I leave my bulbs in the pot and plant them outside in the fall; some people replant them outside in the spring following the Show.)

After potting them, I put the bulbs outside where I can closely monitor their water needs for the next several weeks. Ideally they go into a deep, covered cold frame, but sometimes they go into a makeshift covered hole or trench, away from drying sun and wind. Every week or so I check the water

photo by Rosemarie Vassalluzzo



photo by Walt Fisher



photo by Ray Rogers



photo by Ray Rogers



Top left: Rosemarie Vassalluzzo, an 11-time winner of the Grand Sweepstakes in the Competitive Classes at the Flower Show, plants her daffodils in her garden in the spring, after they come home from the Show. **Top right:** Passers inspect the daffodils entered in the Horticultural section of the Philadelphia Flower Show for torn leaves, faded blooms, diseases or pests that could spread to neighboring plants; they verify plant names and see that the exhibitor has adhered to the guidelines in Exhibitors' Schedule. **Bottom left:** Miniature 'Hawera' is a late-blooming daffodil, so it requires more forcing time than most other daffodils. This 4" pot of nine bulbs was brought into the greenhouse on February 6 for bloom a month later. Premature bloom was held back for a few days in a cold refrigerator. **Bottom right:** Seventeen bulbs were planted in two layers in this 8" pot of 'Peeping Tom,' a cyclamineus hybrid which forces rather quickly. Careful staking and rearrangement of a few misplaced blooms helped it win the author the Delaware Valley Daffodil Society rosette for the best daffodil entry in the Tuesday competition in the 1993 Philadelphia Flower Show.

situation (looking for dry surface soil and lifting them to feel their heft) and gently press down any bulbs that are heaving up. No harm is done if this is done regularly, but don't wait three or four weeks before doing it: you may do more harm than good, and listening to the crunch of breaking roots can be very unpleasant.

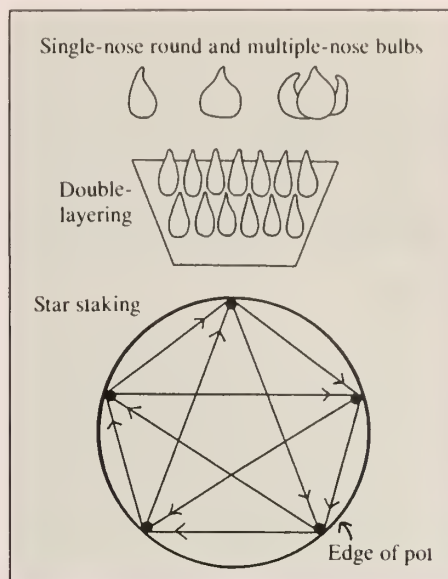
Watering

Watering can become challenging: the torrential rains of the big December 1992 storm dumped several inches of water on central New Jersey. The day after the worst of the storm, I lifted the covers to check the water level, and, to my horror, discovered the pots covered by over a foot of standing water. A quick bailing out and an electric pump solved that drainage problem for the rest of the winter, but you better believe that the bulb frames have since been moved to a higher spot out of a drainage path. Pots of bulbs should never stand in water, except perhaps when they are in active growth, and only in a very shallow pan.

Depending on the temperature, I usually cover the pots in mid-December. If a string of very cold days and freezing nights occurs in November, an initial layer of protection will go on early. Perlite, vermiculite, ground leaves, or straw all work well when placed around the pots and just barely cover the top of the soil mix. This treatment lets me keep an eye on the water needs. The rest of the insulation goes on a few weeks later, covering the tips of the bulbs a foot or more. The insulation "blanket" helps keep the temperature uniformly cold, but not freezing, to permit strong root growth and a minimum of shoot growth. The shoots and flowers will grow later, in the warmer temperatures of the greenhouses.

I normally soak the pots well during the usual late January thaw, and will check a sample pot or two a few weeks before and after that. Other than that, there's nothing to do but work on the pre-entry list for the Show and to start marking a special Show calendar with the staggered removal times from the frame.

Early February begins the pot-lifting routine, starting with the late-blooming 'Hawera.' This cultivar needs a long time to force properly, so I remove the pots from winter protection at three- to five-day intervals before the 10th of February. Other miniatures normally take less than three weeks to force and so come out later. 'Peeping Tom,' 'Ice Follies,' and other trumpets, large-cups, and similar types come out from the 15th to the 22nd or so. These dates are based on the average



Flower Show dates of the 5th through the 15th.

The pots spend their first few days inside in the coldest spot of a greenhouse away from direct sunlight: immediate exposure to higher temperatures and bright light courts disaster. A few days later they go into a slightly warmer, brighter spot, and then finally into a 60°F spot in full light a few days after that. The process from now until the Show entry mornings is a game of juggling temperatures: if the bulbs seem to be growing too quickly to be at peak for the Show, I remove them to a cooler spot, and if they're plodding along, I'll move them into a warmer area (no more than 75°F and never for more than a day or two). I'm careful never to expose them to a sharp drop or increase in temperature, either of which can be damaging and I make sure the soil is nearly wet.

Staking

Staking begins once the shoots are several inches high. I always star-stake my daffodils, except for the really short ones ('Little Beauty,' 'Little Gem,' and the like) and 'Tete a Tete,' which never flops if grown at cool temperatures. I place five dark green stakes at equal distances around the inside rim of the pot and then begin to make a star from dark green twine, keeping the twine just below the top of the stake. I try to gather the shoots toward the center of the pot to make a full center. After completing the star, the twine then goes around in a circle to pull the edges in. I always make a full loop of twine around each stake when making both the star and the circle, and I try to keep the tension even — not always easy.

The height of the stakes depends on the final height of the plants in bloom, trying to make the stakes as unobtrusive as possible, and not staking them too low or too high. It's a balance of what looks good to me and

of what supports the plants. If, even after staking and restaking, the plants still don't look right (most commonly when the flowers aren't evenly distributed), I resort to a few tricks, such as moving the bulbs in the right direction or even removing an excess flower or two. This is best left until the night before the entry day or even on an entry morning.

What if the flowers come on too quickly to be at peak for an entry day, and you don't have a cold greenhouse? All daffodils, in my experience, can be stopped completely by putting them into a 35° to 38° refrigerator. Make sure the soil mix is wet and put a plastic bag over the whole thing, after you've removed any apples or pears, which release flower-destroying ethylene gas. After three days it's a good idea to let the plants have some light for a day, and then they can go back into the refrigerator. I've held back several cultivars, most commonly the smaller ones, for almost two weeks using this method. It's best to attempt this with plants in the bent-bud stage (showing color out of the bud sheath but not opening, with the bud at an angle to the stem), and remember to allow a few days for them to open in the light just before an entry day.

At last it's the night before an entry day. Time to topdress the pot with gravel or coarse sand or sphagnum moss or something to give a uniform covering for the soil mix, and to give it one last good soaking. This is also the time to remove completely any damaged leaves and fading flowers. If the pot isn't clean, do it now, although this should have been done earlier.

Just before handing the entry over to the passer on the entry morning, I give each pot a final check, rearranging any flowers that are out of place, removing any flaws I missed the night before (and this happens more than I'd like to admit . . .), and leveling the topdressing. The rest is now up to the judges.

Following this program, and helped along by some luck and a lot of help from friends, I won nine blue ribbons, four second places, five third places, and one honorable mention in the 1993 PFS narcissus classes. Best of all, the pot of 'Peeping Tom' entered on Tuesday won the rosette for the best daffodil entry — my first rosette for daffodils. Even the "Storm of the Century" that clobbered the East Coast four days later — and the havoc it created — is a dim memory compared to the excitement of spotting that blue and green rosette placed next to my pot of 'Peeping Tom.' That first look at my name engraved on the Horticultural Sweepstakes trophy was pretty exciting, too.



Something Funny Happened on the Way to Exhibit at the

 by Art Wolk

Malevolent school crossing guards, lost assistants, an exhibit crushed by a falling clerk — what more could happen? Try dropout friends and a few other crises, multiply that by a couple of hundred exhibitors and you have some notion about what goes on in the Flower Show's Competitive Classes. Here's one exhibitor's story.

My friend Todd had half my Competitive Class entries in his car and was following me to the Flower Show. Suddenly he was gone! I had lost him at the Ben Franklin Bridge, and I knew he didn't know how to get to the Civic Center.

Fortunately I couldn't guess at what else lay in store for me during that week at the 1993 Philadelphia Flower Show.

Some visitors to the "Hortcourt" area might think that the plants they see there are grown under ideal conditions that bring them to their peak at the perfect time. They might think also that most of the exhibitors have degrees in horticulture and have greenhouses with

staff to nurture the masterpieces they see every year.

Speaking for myself and the dozens of exhibitors I've met, I can say that the visitors' conjectures are not true. While we may have the exuberance and endurance of a botanical researcher, few of us have the same resources. We come from a variety of professions. I happen to be a New Jersey librarian. Most of us are addicted to the competition and excitement. We have our eyes on the calendar all year long. Like a general planning a campaign, we decide which plants to enter in which categories and send in our entry forms by early February.

Since first entering the Show in 1979 I've won many ribbons, mostly in the bulb categories. But 1993 was going to be different. We were building a greenhouse onto the back of our New Jersey home; this would be the year I entered *every* bulb category.

If you've never forced bulbs for the Show you can't imagine what's

involved. Exhibiting bulbs is tailor-made for obsessive-compulsives like me. Strict regimens of temperature, light and timing must be followed or improvised. But it's possible to win blue ribbons in the bulb categories using household conditions. I've won my share. But sometimes it takes ingenuity.

For example, perennial blue ribbon winner Walt Fisher has even experimented with stem shortening chemicals. I've filled our food processor with ice cubes to produce "snow" to put on pots of crocus to hold them back before the 1992 Show.

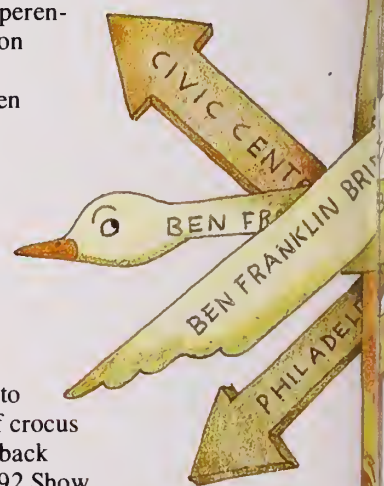
For the winter of 1993, I potted up about 100 pots of bulbs for Show and home use. Almost all went into one of my eight cold frames. After 10-14 weeks, they were brought into the greenhouse for varying lengths of time before the Show.

As Flower Show week approached, the adrenaline started to flow. I listed the items I needed to bring for last-minute primping, and lined up at least one helper for the three judging days (Saturday, Tuesday, and Friday) in the Hortcourt. While everything was going smoothly, deep inside I knew that I could expect the unexpected.

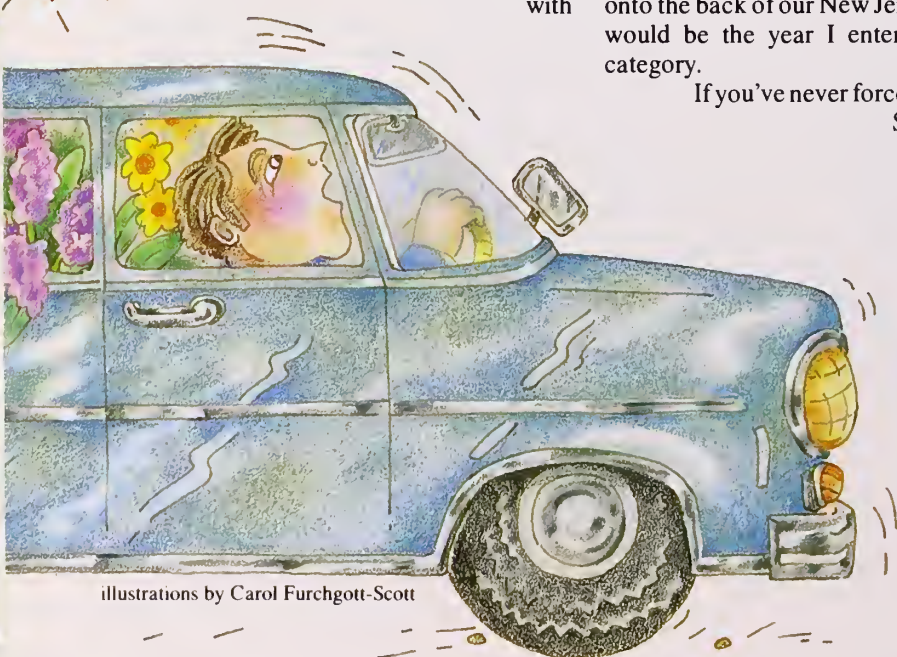
It started five days before the Show.

My 1980 Chevy station wagon started making strange noises. It turned out the motor was on its last "legs." I decided to get a used engine, but the shop needed almost a week to complete the "transplant." What timing! I would just have to limp along in a car that had a maximum speed of 40 m.p.h.

My first judging day: March 6. My 12



Honk!



illustrations by Carol Furchgott-Scott

Flower Show

entries included most of the bulb categories as well as other types of plants. Exhibitors have from 7:00 a.m. until 9:30 a.m. to get their plants primed and approved by volunteers called "passers." Once an exhibit is "passed," the exhibitors can't touch their plants. Other volunteers, "stagers,"

place the plant in its final location. With so much to enter by the 9:30 deadline, my wife Arlene and my daughter Beth (both previous blue ribbon winners) helped out.

I was especially anxious to see how a 12" pot of 'Golden Harvest' daffodils would fare. What a cultivar! Each bulb yielded two flowers so that, by planting two layers of bulbs into the pot, this entry would eventually have 70 blooms.

After cleaning, cutting, and arranging foliage and blossoms, we worked on the clay pots, to remove blemishes with sandpaper. Exhibitors also use a thin layer of vegetable oil on pots to remove unsightly salt stains. By 9:30 they were passed and exhibitors had to leave the floor so the judges could do their job.

At 11:30 most of the judging was over, and we were allowed back on the floor. Scouring the various classes, I found that I had received a number of seconds and thirds, but no blues. But the judging wasn't finished. The large pot of daffs wasn't judged yet. Finally, after about an hour, the results were in. I had won both a blue ribbon and the Delaware Valley Daffodil Society award for the outstanding blue ribbon winner in the daffodil categories.

Monday, March 8. The person who always helped me enter plants midweek called to say she couldn't come. I phoned several friends but no one could help. I was

on my own on Tuesday.

Monday night I stayed up till 1:00 a.m. grooming my 12 entries and getting everything ready.

Tuesday, March 9. Up at 5:00, I loaded my plants into the car and left at 7:00. I figured I'd be at the Civic Center at 7:40 and have almost two hours to enter everything.

On the road, I made sure to leave what I thought was enough clearance in front of me. As I was passing a high school, a crossing guard threw his hands up to stop traffic. The car in front of me slammed on the brakes. I had to do likewise. I held my breath and heard what sounded like falling bowling pins. Before I turned around to survey the damage, I realized the guard had rushed into the street to let an *empty* school bus leave the parking lot. I cursed as I pulled over to survey the damage. Several tulip leaves and blossoms were broken. Other plants were jostled and needed major repair. I took 20 minutes to secure everything, then continued.

The time I lost put me squarely in the middle of rush hour traffic. By the time I got into the Civic Center it was 8:10; I had only 80 minutes to get everything repaired and entered. Angered and panicky, I groomed the tulips: leaves and blossoms had to be removed. One pot of English daisies, whose stems and blossoms had been perfectly erect two hours before, now looked like scattered pick-up sticks. I worked feverishly, then

frantically searched for a free passer.

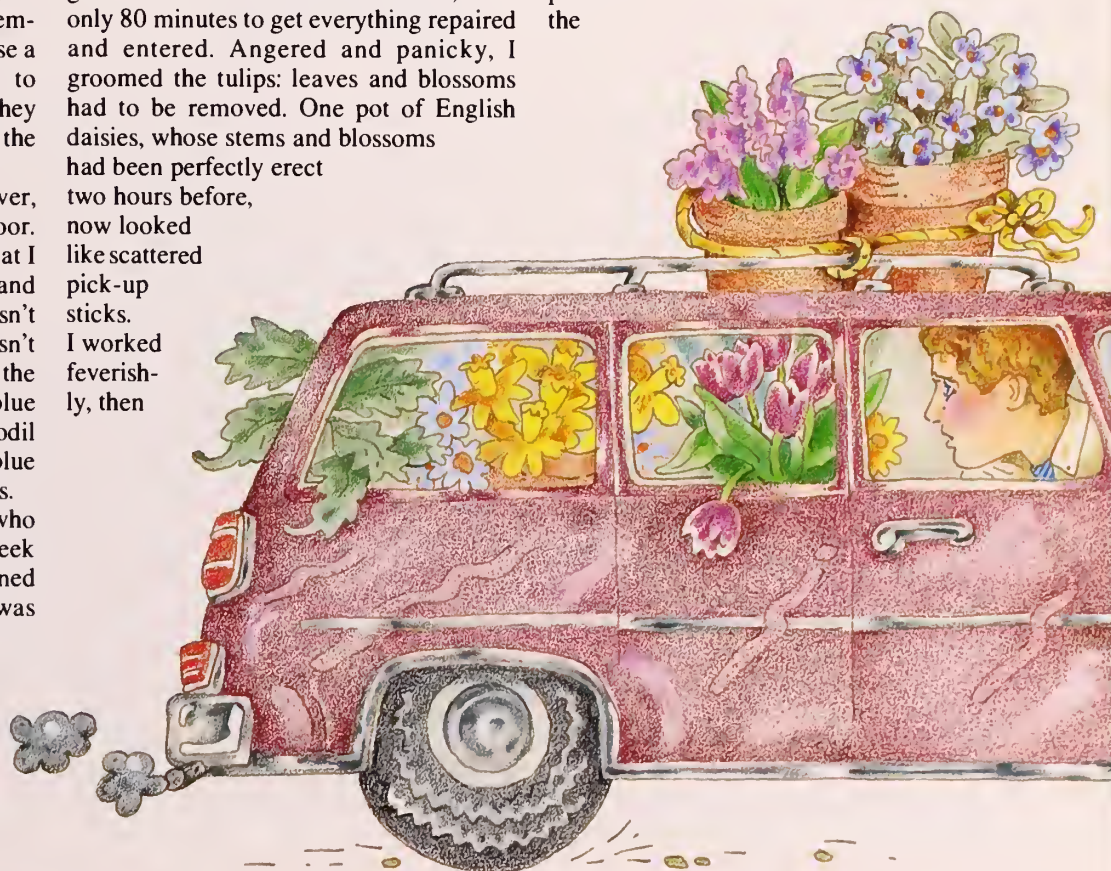
At 9:00 I still had six more pots to enter; at 9:20, three more; at 9:30, one more. Too late!

Suddenly, I felt all the energy drain out of me. The lack of sleep, the flying pots, the limping car, the high speed chase around the exhibit floor, had all taken their toll. Even the simple task of gathering my supplies seemed overwhelming.

I did well. The tulips, for which I had so much hope earlier, got a third. But I won two more blue ribbons for my grape hyacinths and miniature daffodils. Almost everything else won something. I felt elated, if exhausted.

Wednesday, March 10. I began setting my sights on Friday's judging. A 12-in. pot of 'Fortissimo' daffodils seemed to have the best chance for a blue ribbon. Other promising entries included English daisies, hyacinths, miniature daffodils, tulips, and especially an 8-in. pot of *Scilla* with no less than 70 bulbs crammed inside.

It was cloudy on Wednesday morning, which meant that I had to put on the





overhead sodium discharge lamps in the greenhouse to push a few pots into bloom. I called from work to ask my wife to turn off the lights when the sun came out, or to turn them on when the clouds returned. Other pots that were already at their peak stayed in our unheated garage; the temperature had to be above freezing but below 40°. If the temperature in the garage were to go below freezing at night, I would leave the door between the house and garage slightly ajar. On the other hand, some days that week were so warm that leaving pots in the dim garage would have made the plants too leggy, so the pots were put out on our shaded front patio. When you're trying to get about 40 pots ready for the Show, all in different stages of bloom, this kind of shuffling can make your head spin.

Thursday, March 11. The pot filled with 70 bulbs of *Scilla* was given a brief shot of sunshine, so that by late afternoon every one of the 70 bulbs had bloomed. When viewed from the top, you couldn't even see

the pot; the flowers hid everything. Perfect! That night I readied 12 pots for Friday's judging. My pot of hyacinths had six good blooms and a seventh that was a little behind. I put the pot on our dining room table and left the chandelier on all night. I finally got to bed at 2:00 a.m.

Friday, March 12. Up at 5:00 a.m., I ate, then got my supplies ready. My friend Todd arrived at 6:30 and helped me to load my car. The plants were a bit overcrowded, so Todd put half my entries into his wagon.

Everything went smoothly: no falling pots, no obsessive crossing guards. I kept Todd in my rearview mirror. When I paid my toll at the bridge, I realized Todd was missing. I looked left, right, front, and rear, but no Todd! The line of cars in back of me grew longer. Horns blew. The toll collector glared at me. I had to go on. On the bridge, in a panic, I looked everywhere. I preferred the crossing guard to this. As I neared the end of the bridge, I spotted him in the far right lane. By frantically leaning on my

horn I got his attention, and he managed to move quickly two lanes to the left to get behind me.

We got all of the plants into the Civic Center and Todd helped spruce up both pots and plants.

Todd and I worked steadily, but by 9:25 I still had one more pot to enter. At 9:28, as I moved toward the staging area, two acquaintances were heading me off to chat. I frantically waved them off, and raced on. With 30 seconds to spare I entered my last pot in the "Collection" category.

Todd and I rounded up my scattered

The shock of what was happening kept me cemented in place while she fell directly on top of my pot of tulips.

materials, parked our cars, and walked around the Show while judging commenced. As had happened the previous Saturday, I received a slew of seconds and thirds. The 12-in. pot of 'Fortissimo' daffodils only got an honorable mention, probably because I didn't have the heart to remove some too tall blooms. Blue ribbons are awarded for pots with blooms of uniform size and height. And with daffodils, the noses of the blooms should face symmetrically outward.

The biggest disappointment was the *Scilla*, which also received an honorable mention.

Moving away from the *Scilla*, I noticed that the judges were at the tulips. Although my pot of 'Cheerleader' tulips had too few blossoms to win, curiosity kept me glued to the spot as ribbons were being awarded. As one assistant was chatting with the judges, I noticed she began to fall. Although the fall seemed to go on forever, I couldn't move to help her. The shock of what was happening kept me cemented in place while she fell directly on top of my pot of tulips. Everyone moved to help her up. They then tried to prop up my tulips that had suddenly developed new joints midstem. It was more than I could bear. I turned on my heels and fled. After five minutes I cooled down and returned to find that my tulips had actually been left in the Show. Luckily, I found some sympathetic passers that agreed to remove them.

The lack of a blue ribbon on that day left me feeling deflated. As I prepared to leave,

I suddenly remembered my pot of cowslips (*Primula veris*). They had won a second in the primrose category on Tuesday, and on Friday I entered them, almost as an afterthought, in the "Herbaceous Hardy Perennial" category. I hadn't even had time to properly primp the plant before entering it. Unbelievably, it had won a blue ribbon. What a lift. It seemed as if this one day mirrored the events of the whole growing year: ups and downs, failures and successes, and the definite need for a sense of humor.

My final count for the week was one major award, four blue ribbons, nine seconds, eight thirds and five honorable mentions. I had garnered enough points to put me in eighth place overall. It had been my most successful Show and the awards banquet was yet to come on Saturday.

Saturday, March 13. Yes, that Saturday. The day of the worst blizzard in decades. In the morning I called the Flower Show office and learned that the Awards Luncheon was still to take place. Who knew when

I would qualify to come again. I was going in. Dressed in Nanook gear, I did a steady 18 m.p.h. all the way in. On a Saturday when 25,000 people usually come to the Show, there was a paid attendance of 641, and it seemed as if less than one-tenth that number were there. In spite of the storm, most of us were upbeat. Most of us seemed to move with a bounce in our step that said "this is the worst storm of the century and we are eccentric enough to actually be here." Unfortunately Ray Rogers who had won the Horticultural Sweepstakes, couldn't make it in from Northern New Jersey. The day before he had said that "wild horses couldn't keep [him] away." Wild storms were another matter.

So why do we do it?

I can assure you that most if not all the exhibitors go through the same torment,

worry, stress, and occasional glee. Exhibiting is an unquenchable addiction. Ray Rogers said that he won't push himself to win the sweepstakes in the future. But the truth is that exhibitors like Ray push the rest of us to excel. By using the diversity available in the plant kingdom, they show us what can be achieved when the goal is to create beauty. Stick around Ray, we need you.

Perhaps next year I'll try to grow one of Ray's *Arisaema*. . . . On the other hand, maybe next year I'll be able to get 80 *Scilla* bulbs into one eight-inch pot.

Art Wolk, a gardener with many interests, is a Camden County librarian. He has a degree in biology and gives garden lectures and owns "Wolk's Custom Grown Plants," a mail-order business. His home garden was recently the subject of a feature story in the *Courier-Post* (New Jersey). Wolk has been exhibiting in the Flower Show since 1979 and hopes that the '94 Show will be somewhat less eventful for him.



illustrations by Carol Furchgott-Scott



Beautiful, Bountiful Onion Braids

 by Elise Payne

An unusual, inexpensive gift for the person who has everything, a natural decoration, an interesting entry in the Harvest Show, something everyone can use that includes a touch of yourself — a simple onion braid can be all of these. And making an onion braid is simple if you follow the easy directions listed here.

First let's look at the lovely, lowly onion, *Allium cepa*. It's a biennial (vegetative growth the first year, reproductive growth the second year). The latin name *cepa* means that it has head-shaped parts. Onions are an ancient source of food, maybe originating from Asia Minor or India, with definite references to them being made in early Greek and Egyptian writings.

the green scene / march 1994



photo by Ira Beckoff

Types

There are three basic types. The American onions are good keepers, usually yellow with a strong flavor. Then there are the European or other international onions that do not store as well, with intriguing names such as Bermuda, Spanish, Italian, and White Portogals. The most exotic looking is the third kind that forms bulbils rather than flowers. The stalks bend over so that they plant themselves in mid-summer, forming early spring onions the following year.

Culture

Early in the spring, here in Philadelphia late March or early April, buy at least a

pound of onion sets. You may feel you'll never need that many onions but you can enjoy them for months and in many stages to titillate your taste buds. In early spring salads they add zest, or used as a garnish with leaves shredded lengthwise, they provide a foretaste of verdant renewal. Later, maturing onions can be used all summer long.

To make onion braids I prefer 'Ebenezer' or 'Stuttgarter' varieties as they have consistently good quality, more uniform size, seem to store longer, and have a good strong flavor. Get out the hanky when you cut these unless you refrigerate them for an hour or so before using. I generally find the catalog sources have better quality and more uniform size sets, and those characteristics seem to be carried on to the final bulb.

Prepare the onion bed the fall before if it is in a fairly moist area, or in late March to early April after the soil has become workable. The area should drain well but be moisture retentive. If you cultivate the soil too early it causes "peds," a horticultural term meaning hard clods that become difficult to break up. As onions are heavy feeders, enrich the top eight inches of soil with plenty of compost or 5-10-10 fertilizer to encourage good root growth. Feed again in early June with a liquid fertilizer. So the hungry little sets have less root competition from their siblings, plant them six inches apart with the tops barely sticking out of the ground. Or plant the sets so they are just covered because the birds might pull them up as they start to grow —birds like fresh spring greens too! You can also cover the bulbs with a light cloth if you have extra-hungry, extra-smart birds, but be sure to remove the cloth before the greens are two inches high. Provide even moisture, ideally an inch a week minimum throughout the growing season. Uneven moisture conditions cause split bulbs. If you see these split bulbs, use them in cooking. Also remove any blossoms you see forming and use the bulbs right away because they won't be good keepers. If you choose to let a few plants form flowers, pick them just as they open and use them in salads for an aesthetically pleasing and delectable addition to your spring repast.

Foiling robbers in the garden

Next to weeding carrots, weeding onions

is one of the most tedious jobs. Weeds rob plants' nutrition so it is important to eliminate them. The easiest and most effective method of control is before planting to spread four sheets of newspaper on the prepared ground, cover the sheets with clean grass clippings (no herbicide!), or straw, and then tear little holes six inches apart and plant the onion sets through the newspaper. This smothers the weeds and makes the few that do survive easy to eradicate. It also keeps the soil cooler, which the onions seem to like.

Harvest time

To harvest, wait until all the tops have fallen down and are slightly browned. Do not knock the tops down — onions will know when they're finished growing and will relax on their own. In the Philadelphia area this is usually at the mid- to end of July. In the morning carefully pull the onions when the soil is moist, the tops are almost dry to the touch, and there is no rain predicted for two days. Leave them lying on the ground to cure for two days, covering them at night to keep off the dew. Then bring them out of the garden; remove all soil and cure them in a sheltered, dry place for about another week.

On one of those humid summer days not good for much else, you will be ready to make the beautiful braids from your bounty.

With your onion treasures cured and cleaned, choose a humid day to make your braids outdoors. In this weather cured onion tops will have some humidity in them and won't be brittle. For the first braid or two use your less-than-perfect onions for practice. (You can also practice with tennis balls in panty hose, but they would look peculiar hanging in your house.) You will need 12 to 15 onions for each braid plus three two-and-a-half-foot-long pieces of sisal twine. Use firm, undamaged, unsplit specimens with intact, dry leaves, narrow slender necks and with no rot evident on the bottom or elsewhere. Leave on all clean, unblemished onion skins. They can be spruced up later but for now the skins will be used as protection. Ideally all onions will be approximately the same size, but not be extra-large sized.

Step 1. Taking the three largest onions lay them vertically on a table next to each other with the roots away from you and the

continued



leaves toward you. Lay each of the three pieces of twine on top of each set of leaves, letting the twine extend up to the roots. This twine will be your support for the braid and should be incorporated with the leaves as you go.

As easy as braiding hair

Step 2a and 2b. The process is just like braiding hair, and is just as easy. Starting the "braiding set" with leaves on the right side, holding the leaves just under the onions and twisting slightly, tuck the leaves under the center leaves, then always twisting slightly, tuck the left leaves under the center leaves, keeping the braid fairly snug, and once more tuck the right leaves under the center leaves. You have completed one set. Do one more set of braid without adding onions starting with the leaves on the left side.

Step 3 and Step 4. You are now ready to

add onions in multiples of three to each set. Place the bulb of the next onion just below the left-hand onion and drape its leaves across and over and combining with the right-hand leaves. Then starting with the next "set," snugly twist and tuck this right-side bundle of leaves under the center leaves. Now lay an onion below the right-hand top onion, draping its leaves across and over and combining with the left-hand leaves. Snugly twist and tuck this bundle of leaves under the center leaves. Now lay an onion below the center onion, drape its leaves over and combine them with the right-hand leaves. Snugly twist and tuck this bundle of leaves under the center leaves. Voila! The true beginning of your braid.

Step 5. Now make one more simple braid set without adding any more onions. Then make another braid set adding onions in the same way. Continue until you have used 12 or 15 onions. Don't worry if the

onion bulbs start to flop off of the braid. Just keep the leaves snug as you can under the onions.

Finishing it off

When you are finished braiding, trim the twine back from the first bulbs to where the twine enters the first braid. There are at least two ways to finish the braid for an effective hanging. You may choose to tie an overhand knot incorporating the leaves and twine, then cut off the leaves protruding and tie another knot in the twine to hang the braid from (the braid will be heavy). Or you may choose to twist twine around the top of the protruding leaves. Then make a knot incorporating the twine from the braid. Just be sure that the weight of the hanging braid is borne by the twine running through the braid whatever method you use.

To use the braided onions, keep an eye out for any onions that begin to soften and remove them immediately. Then, if you can bear to cut into your handiwork, start

Step 4.



Step 5.



removing the onions by cutting them from the bottom of the braid. Ideally the braid will hold up until about the end of February when Mother Nature's internal clock will cause them to move toward reproducing and they will likely soften and want to sprout.

So, now you've created a beautiful, bountiful braid that you can be proud of. I encourage you to enter it in the Harvest Show where onion braids will be one of the four onion classes. You have a good chance to be a winner, either at the Show or at home with your family or friends.

Harvest Show

Harvest Show dates for entering exhibits: Thursday and Friday, September 15 and 16.

To visit the Show: Saturday and Sunday, September 17 and 18; Special members preview on Friday, September 16.

Where: Horticulture Center, Fairmount Park.

Schedules listing classes will be mailed to Pennsylvania Horticultural Society members in the spring. If you are not a member and would like to receive an exhibitor's schedule, please contact Ann Domalevicz at (215) 625-8289.

Sources

W. Atlee Burpee & Co.
300 Park Avenue
Warminster, PA 18974
(215) 674-9633

Dutch Gardens
P.O. Box 200
Adelphia, NJ 07710
(908) 780-2713

Gurney's Seed & Nursery Co.
110 Capital Street
Yankton, SD 57079
(605) 665-1930

Henry Fields Seed & Nursery Co.
415 North Burnett
Shenandoah, IA 51602
(605) 665-9391

Jung Quality Seeds
Randolph, WI 53957
(414) 326-3123

Elise Payne is the former Horticulture chair of the Harvest Show. She is the coordinator of Judges and Awards for the 1994 Philadelphia Flower Show. Payne is also a member of Garden Club of Bala Cynwyd, a National Council Flower Show judge and gives talks on a variety of gardening subjects.

OVER THE BACK FENCE

Join a Plant Society, you'll learn a lot and you'll never be lonely.

 by Lucy Fuchs

I always liked the notion of a back fence that included a friendly and sharing neighbor on the other side. The phrase "over the back fence" resonates with feelings of simple pleasure and shared enthusiasm. The one time I had a neighbor who gardenized it was as if my pleasure doubled. In the spring as each new woodland plant emerged I would have someone to share the thrill of it with. And I came to grow lilies because of the beautiful ones she showed me. I learned from my neighbor that lilies were after all not that hard to grow and soon had my own lovely patch.

One day my neighbor in high good humor invited me and my husband over to see something. It turned out to be a squash vine of phenomenal proportions. It took over the entire vegetable patch and was well on the way to devouring the lawn. We were amused and awestruck. As true gardeners we appreciated the jokes nature sometimes plays, as well as commiserating with each other at her darker tricks. Like the time we both lost the one-day-old blooms on the autumn crocus because of a late September thunderstorm. Shared pain is somehow easier to endure.

Since that time and that house I have not had a gardening neighbor. I have woods and shrubbery instead. Though I enjoy the serenity, I missed the friendship and needed to repair the loss. The remedy was to construct a new, metaphorical back yard fence with lots of friends. To do so I have joined two plant societies and though my garden is still a quiet retreat it also has become a pleasure to be shared with the larger world out there. One is the Hardy Plant Society Mid-Atlantic Group and the other is the Delaware Valley Chapter of the American Rock Garden Society.

The membership in both groups is a democratic mix of old hands and neophytes. There are nurserypeople, landscapers, and botanists, but most are just plain dirt gardeners. Both plant societies sponsor lectures, put out chatty and informative newsletters and hold spring and fall plant sales. It is the plant sales that most



Abe Fuchs carries the author's purchases from the Delaware Valley Chapter of the American Rock Garden Society 1993 Fall Plant Sale. Abe jokes that they'll have to add more land to accommodate Lucy's exuberant purchases at Plant Society sales.

give me the feeling of a large companionable back fence. They are announced a month or two beforehand in the newsletters so that members can pot up plants and label them properly in good time. So for two months before the sale I am engaged in looking around to see what I like but have too much of; what I don't like but someone else might' and what needs dividing. In short, for two months I look at my plants not in tranquil isolation but with others very much in mind. A feeling of community is in my garden.

The day of the sale arrives; all is hustle and bustle. I am glad to say that this year I was prepared with pots properly labelled. Not as before, frantically looking up botanical names while my husband was loading the car. Members' names are printed on the labels too in case advice is sought later. That is always helpful although one year I called the gardener whose native orchid I bought, but instead of receiving reassurance it went the other way around. Like an adoptive parent I had to reassure the natural mother that I was caring and competent

and had a good spot for her orchid.

The sale has the lively flavor of a fair. People are busy unloading boxes of plants and greeting friends. For one delicious hour we get to look at the large and varied array of plants. Old standbys and exotics are side by side on long tables. The assortment exceeds the selection of the local nurseries and almost equals the nationally known mail order nursery catalogs. Speaking of catalogs, the fervor with which I respond to their colored photographs is surpassed by the collective excitement and enthusiasm at the sale. True the plants are small and one doesn't necessarily see them in bloom. Still there is always someone standing next to you admiring the same plant you are contemplating who will fill you in on the particulars. Either he or she has grown it or knows someone who has. Sometimes it is the very gardener who raised it. I have a *Spiraea* in my garden now that is a pleasure in itself but also a sweet reminder that at a sale a garden friend thrust it into my hand saying "Buy it; it's lovely — the bloom has three colors!" How good of her to care.

As most of the plants are sold for 50 cents or a dollar I feel expansive. I know too that they are locally grown and at least one gardener has been successful with them. So I give free rein to spontaneity and buy some solely entranced by the shape of the leaf or even its exotic name. That is how I came to my *alstroemeria*. For 50 cents I had a grand adventure. An education too. This handsome plant looks like no other I have seen and is thriving brazenly among its more subtle neighbors. I would certainly not have ordered it from a catalog as I am not generally fond of red and green combinations. True love, however, comes upon us without consistency or plan. I have checked it out in various reference books and find there are many other cultivars of colors I would have thought I preferred, but my heart now belongs to *Alstroemeria psittacina* with its red and green pizzazz. I am grateful to its donor and will tell him so at the next plant sale.



The Delaware Valley Chapter of the American Rock Garden Society Plant Sale held at the Horticulture Center in Fairmount Park is only one of ARGs's year-round activities. Monthly meetings, often with nationally known speakers, keep the lively network well informed.

All is not pleasure, of course, but we do not expect perfection in plants, neighbors or ourselves. A small disappointment is that I do not always get the plants I admire during the look around period. The reason being, first choice goes to those who contribute first 100 plants, then 90, and so on down. On only one occasion have I made it to 20. Ten seems to be my norm. No matter, I always find a half dozen I want. Later in the sale, there is also a little anxiety about the plants I donate. Will they be chosen and appreciated? If not, how does that reflect on my gardening? This year I brought some reblooming iris. As they were dormant with dry rhizomes they lacked the fresh look of the other plants. I put them in brown paper bags labelled "reblooming iris" and kept my fingers crossed hoping people would not be turned off by their drab appearance, know they were supposed to be dry, and that they would notice "reblooming" on

the label. It was not until some weeks later that I heard that everything sold except pachysandra. Good! A home for each lovely iris.

Now the excitement of the sale is over. I know a few people I've not met before. I have a few plants I've always wanted, a *Primula japonica*, a dwarf veronica and a few more unfamiliar ones to get to know, *Tiarella wherryi* and a *Corydalis ochroleuca*. I have been looking hard at the garden for a place to put them. My husband thinks it funny to makes jokes about buying me more land. Finally I decide to plant some near established plants that need dividing thereby freeing up some space. The divisions, of course, will be in the next plant sale. Before then there will be a few back and forth visits with new friends, lots of good garden talk and some more plant exchanges, making real my vision of the neighbors over the back fence.

To Join

Hardy Plant Society Mid-Atlantic Group

Contact Jane Golas
512 West Wayne Ave.
Wayne, PA 19087
(610) 688-7660
Dues \$12

Delaware Valley Chapter of the American Rock Garden Society

Contact Dick Rosenberg
5 Westview Road
Bryn Mawr, PA 19010
(215) 525-8683
Dues: \$5 - Individual
\$7 - Family

Sale open to members only

See dates and times for sales in
Plant Societies' Special Meetings
and Sales on page 28.

Plant Societies' Special Meetings and Sales 1994

 by Carol Lukens



AFRICAN VIOLET SOCIETY OF AMERICA, INC.

National Convention
May 26-28
Denver, Colorado
Call for details

Contact:
Anne Tinari
Tinari Greenhouses
2325 Valley Road, Box 190
Huntingdon Valley, PA 19006
215-947-0144

DELAWARE AFRICAN VIOLET SOCIETY

African Violet Show:
"Wonderful World of
Violets"

March 26, 1:30-9pm
March 27, 11-6pm
Christiana Mall, just off
I-95 in Newark, DE
Show Judging by qualified
AVSA Judges

Plant Sale
same as show

Contact:
Betty Gregg
2817 Grubb Rd.
Wilmington, DE 19810
302-475-1253

AFRICAN VIOLET SOCIETY OF PHILADELPHIA

**African Violet Show & Plant
Sale**

April 30, 1-9pm
May 1, 12-4pm
Plymouth Meeting Mall,
upper level
Germantown Pike
(exit 25 off Pa. Turnpike)
Plymouth Meeting, PA 19462

Open House
September 8, 7:30pm
2nd Baptist Church of
Germantown
Germantown Ave. &
Upsal St.
Mt. Airy, PA 19119

Contact/Sale:
Peggy DePhillippo
1074 Grange Avenue
Collegeville, PA 19426
610-489-4744

Contact/Open House:
Margaret Cass
920 Andorra Rd.
Lafayette Hill, PA 19444
215-836-5467

AFRICAN VIOLET SOCIETY OF SPRINGFIELD

**Annual African Violet Show "Carousel of
Violets" & Plant Sale**

April 22, 12-5pm
April 23 & 24, mall hours
Springfield Mall
Baltimore Pike & Sproul Rd.
Springfield, PA 19064

Contact:
Mildred L. Knorr
555 W. Rolling Rd.
Springfield, PA 19064
610-543-0791

MID-ATLANTIC BONSAI SOCIETIES, DELAWARE VALLEY CHAPTER

Eleventh Annual Mid-Atlantic Bonsai Festival

Featured guests include: Deborah Koreshoff, Roy
Nagatoshi, Chase Rosade, Randy Clark, Martin
Schmalenberg
April 15, 16 & 17
Holiday Inn
Grantville, PA

Full registration for the three-day seminar, \$105. Friday evening and Saturday
only, \$75. Sunday only, \$45. Banquet & auction Sat. eve. Call for information.

Contact:
Kurt Wittig
17 Old Mill Drive
Denville, NJ 07834
201-361-6642

BRANDYWINE CONSERVANCY

Plant Sale
May 14 & 15
9:30-4:30pm
Brandywine River
Museum
Routes 1 & 100
Chadds Ford, PA 19317

Contact:
Lucinda Laird
P.O. Box 141
Chadds Ford, PA 19317
610-388-2700

PHILADELPHIA CACTUS AND SUCCULENT SOCIETY

**Exhibit at the Philadelphia
Flower Show**

March 6-13
Philadelphia Civic Center
34th & Civic Center Blvd.
Philadelphia, PA 19104
Admission to Flower Show:
\$11.50

**9th Eastern Cactus &
Succulent Conference**

October 7-9
Valley Forge Hilton
251 W. DeKalb Pike
King of Prussia, PA
19406

Plant Sale & Plant Show

October 8, 12-4pm
Valley Forge Hilton
251 W. DeKalb Pike
King of Prussia, PA
19406

Open to the Public
Admission: Free

Contact:

Rita Hojnowski
517 Cecelia Drive
Blackwood, NJ 08012
609-227-0599

Marion Snyderman
1140 Bingham Street
Philadelphia, PA 19115
215-677-1636

DELAWARE VALLEY CHRYSANTHEMUM SOCIETY

**Annual Chrysanthemum
Show**

October 15, 12-5pm
October 16, 10-5pm
Longwood Gardens
Kennett Square, PA 19348
Longwood Admission: \$10.00

Plant Sale

May 21, 10-4pm
Tyler Arboretum
Lima, PA 19037

Contact:

Ralph Parks
821 Meredith Dr.
Media, PA 19063
610-566-5644

DELAWARE VALLEY DAFFODIL SOCIETY

Annual Daffodil Show

April 23, 1-5pm
April 24, 10-5pm
Longwood Gardens
Kennett Square, PA 19348
Longwood Admission: \$10.00

Plant Sale

September 17, 10-4pm
Delaware Center For
Horticulture
1810 N. DuPont St.
Wilmington, DE

Contact:

Joy Mackinney
535 Woodhaven Rd.
West Chester, PA 19382
610-399-1211

NEW JERSEY DAFFODIL SOCIETY

**19th Annual New Jersey and Northeast
Regional Daffodil Show**

April 22, 1-5pm
April 23, 10-3pm
Frelinghuysen Arboretum,
Haggerty Building
53 E. Hanover Ave.
Morristown, NJ 07960

Contact:

Paula Stuart
394 Charlton Ave.
South Orange, NJ 07079
201-763-0935

GREATER PHILADELPHIA DAHLIA SOCIETY

Dahlia Show

September 17, 2-6pm
September 18, 10-6pm
Longwood Gardens
Kennett Square, PA 19348
Longwood Admission: \$10.00

Tuber Sale

May 19, 7:30pm
Location TBA

Contact:

Pauline Fanady
201 W. Evergreen Ave.
Philadelphia, PA 19118
215-247-6577 (evenings)

DELAWARE VALLEY DAYLILY SOCIETY

**Regional Convention Garden
Tour**

July 16, 7:30-4pm
Reservation only
Fee: \$45 includes bus & lunch
Call for info., or write

Plant Auction

August 27, 9-11:30am
Church of the Good
Samaritan
212 W. Lancaster Ave.
(Route 30)
Paoli, PA 19301

Contact:

Regional Convention
Marie Politowski
547 Norwyck Dr.
King of Prussia, PA 19406
610-337-3528

Plant Auction

Cathy Tomlinson
788 N. Reeds
Downingtown, PA 19335
610-458-0177

FRELINGHUYSEN ARBORETUM GESNERIAD SOCIETY

Flower Show
October 2, 11-4pm
Frelinghuysen Arboretum
Hanover Ave.
Morristown, NJ 07962

Plant Sale
same as show

Contact:
Jeanne Katzenstein
1 Hallvard Terrace
Rockaway, NJ 07866
201-627-2755

AMERICAN GOURD SOCIETY INC.

Ohio Gourd Show
October 1, 9-5pm
October 2, 12-5pm
Morrow County Fair Grounds
Mt. Gilead, OH 43338
Fee: Adults \$2.00, Children
12 & under free

Contact:
John Stevens
P.O. Box 274
Mt. Gilead, OH 43338
419-946-3302

HARDY PLANT SOCIETY

Spring Plant Sale
May 14, 10am
Jenkins Arboretum
631 Berwyn Baptist Rd.
Devon, PA 19333
members only

Fall Plant Sale
September 10, 10am
Jenkins Arboretum
631 Berwyn Baptist Rd.
Devon, PA 19333
members only

Contact:
Jane Golas
512 W. Wayne Ave.
Wayne, PA 19087
610-688-7660

HERB SOCIETY OF AMERICA, DELAWARE VALLEY UNIT

Herb Sale
May 14, 10-4pm
Prallsville Mill
Route 29
Stockton, NJ 08559
Lunch available for fee

Contact:
Joan Schumacher
25 Rosemore Drive
Chalfont, PA 18914
215-997-1549

HERB SOCIETY OF AMERICA, NORTHERN NEW JERSEY UNIT

Plant Sale
May 7, 10-2pm
Delbarton School
Route #24
Morristown, NJ 07960
Boutique & Bake Tables

Contact:
Betty Robrecht
8 Hillcrest Boulevard
Warren, NJ 07059
908-769-5640

HERB SOCIETY OF AMERICA, PA HEARTLAND UNIT

"Herbal Delights" Symposium
'LAVENDER AND LACE'
June 27 & 28
Albright College
Reading, PA 19612-5234
Call for registration info.

Contact:
Darlene Henning
173 Deysher Road
Fleetwood, PA 19522
610-987-6184

HERB SOCIETY OF AMERICA, PHILADELPHIA UNIT

Annual Herb Sale
May 12, 10-2pm
1694 Pughtown Rd.
Kimberton, PA 19442

Contact:
Joyce Douglas
P.O. Box 672
Kimberton, PA 19442
610-933-1492

HERB SOCIETY OF AMERICA, SUSQUEHANNA UNIT

Herb Sale
May 7, 9-1pm
Farm and Home Center
1383 Arcadia Road
Lancaster, PA 17601

Contact:
Genevieve Libhart
1980 Marietta Pike
Marietta, PA 17547
717-399-0228

THE HIGHLANDS HISTORICAL SOCIETY

The Highlands Garden Party and Herb Sale
May 18, 10-6pm
May 19, 10-3pm
7001 Sheaff Lane
Fort Washington, PA 19034
Fee: \$3.00 general admission to plant sale

Contact:
Cathy Hoffman Lynch
7001 Sheaff Lane
Ft. Washington, PA 19034
215-641-2687

HOLLY SOCIETY OF AMERICA, DELAWARE VALLEY CHAPTER

Spring Holly Day
Meeting, Tours, Plant Sale,
and Lunch
April 23, 10-4pm
University of Delaware
Call for directions to starting
point.
Fee: \$5.00 annual chapter
dues, plus lunch

Plant Sale
in conjunction with
meetings

Contact:
Thein Myint
933 Morris Ave.
Bryn Mawr, PA 19010
610-525-0599

HORTICULTURAL SOCIETY OF SOUTH JERSEY

Flower Shows
May 10, 8pm

Monthly Meetings
2nd Tuesday, January

Contact:
Rita Hojnowski

September 13, 8pm
Cherry Hill Community
Room
820 Mercer Street
Cherry Hill, NJ 08034

thru June, September
thru December,
7:30pm
Cherry Hill Community
Room
820 Mercer Street
Cherry Hill, NJ 08034

517 Cecelia Drive
Blackwood, NJ 08012
609-227-0599

DELAWARE VALLEY CHAPTER OF THE AMERICAN HORTICULTURAL THERAPY ASSOCIATION

**Annual Conference — 'Horticulture — The
Common Ground Cultivating Diversity'**

June 10, 8:30-4pm
Swarthmore College
Swarthmore, PA 19081
Conference fee

Contact:
Bernie Miller
511 N. Monroe
Media, PA 19063
610-566-2162

DELAWARE VALLEY HOSTA SOCIETY

Slide/Lecture/Plant Sale
March 19, 2pm
Ramada Inn
Routes 1 & 202
Chadds Ford, PA 19317

Plant Sale
June 18, 2pm
Sylvia Green Residence
548 S. Guernsey Rd.
West Grove, PA 19390

Contact:
Warren Pollack
202 Hackney Circle
Wilmington, DE 19803
302-478-2610

PHILADELPHIA CHAPTER OF IKEBANA INTERNATIONAL

Ohara demonstration of Ikebana by

Mrs. Young Yum
April 28, 10-12pm
Radnor Memorial Library
Wayne, PA 19087

Contact:
Mary Lou Kenny
RD #1, Box 202
Nantmeal Rd.
Glenmoore, PA 19343
610-469-9646

DELAWARE VALLEY IRIS SOCIETY

Iris Show
Judging by A.I.S. Certified
Judges
May 29, 12-5pm
Judging 10-12pm
Waterloo Gardens Inc.
200 N. Whitford Rd.
Exton, PA

Plant Sale
July 16, 10-2pm
Jenkins Arboretum
631 Berwyn Baptist Rd.
Berwyn, PA 19312

Contact:
Betsy & Charles Conklin
91 Duncan Lane
Springfield, PA 19064
610-544-3984

DIAMOND STATE IRIS SOCIETY

Iris Show
TBA

Plant Sale
July 9, 10-2pm
Prices Corner Shopping
Center
July 10, 1-4pm
Delaware Agricultural
Museum
Dover, DE

Contact:
Mrs. Arthur F. Martin
116 Meriden Drive
Hockessin, DE 19707
302-998-2414

MID-ATLANTIC LILY SOCIETY

Annual Lily Show
June 25, 1-5pm
June 26, 10-5pm
Longwood Gardens
Kennett Square, PA 19348
Longwood Admission: \$10.00

Plant Sale
October 30, 1-3pm,
auction 2pm
Jenkins Arboretum
631 Berwyn Baptist Rd.
Berwyn, PA 19312

Contact:
Joy Mackinney
535 Woodhaven Rd.
West Chester, PA 19382
610-399-1211

MARIGOLD SOCIETY OF AMERICA

Annual Meeting
Details TBA
Annual Dues: \$12.00,
includes *Amerigold*
newsletter, 4 times a year.

Contact:
Jeannette Lowe
P.O. Box 5112
New Britain, PA 18901
215-348-5273

FRIENDS OF THE NATIONAL ARBORETUM

Lecture
Dr. Michael Dirr
April 16
Session I: 10:15am
Session II: 2pm
Members: \$15
Non-members: \$20

**Third Annual Gardeners
Plant Sale & Rare
Plant Auction**
April 16, 10-4pm
US National Arboretum

Contact:
Lisa Wilson
US National Arboretum
3501 New York Ave., NE
Washington, DC
20002-1958
202-544-8733

NEW JERSEY NATIVE PLANT SOCIETY

Annual Meeting
March 26, 10am
Holly House
Cook College Campus
Rutgers University
New Brunswick, NJ 08903

Plant Sale
April 30, 8-5pm
Cook College Campus
Rutgers University
New Brunswick, NJ
08903

Contact:
Jeff Botterger
c/o T&M Associates
11 Tindall Road
Middletown, NJ 07748
908-842-5839

DELAWARE ORCHID SOCIETY, INC.**Monthly Meetings**

Second Tuesday every
month September thru
June, 7:45pm
Talleyville Fire Hall
U.S. Route 202
Talleyville, DE 19803
(just north of Wilmington)
Free and open to public

Annual Orchid Auction

March 27, 1:30pm
Talleyville Fire Hall
U.S. Route 202
Talleyville, DE 19803
(just north of Wilmington)

Contact:

Mr. A. A. Chadwick
520 Meadowlark Lane
Hockessin, DE 19707-9640
302-656-1091

DELAWARE VALLEY ORCHID COUNCIL**7th Annual DVOC Speakers Forum**

Speakers: Francisco Miranda, Norito
Hasegawa and Marguerite Webb
Topics: Brazilian species, Paphiopedilums
and Masdevallias
April 9, 8:30-4pm
Travel Lodge
Mt. Laurel, NJ
Fee: \$25, includes buffet lunch
10 Dealers will also sell orchid plants

Contact:

Lois Duffin
7411 Boyer St.
Philadelphia, PA 19119
215-248-3626

GREATER PHILADELPHIA ORCHID SOCIETY**Monthly Meetings**

3rd or 4th Thursday,
September thru June, 8pm
Merion Friends Activities
Center
615 Montgomery Ave.
Narberth, PA 19073

Annual Plant Auction

September 22, preview
7pm, auction 7:30
Merion Friends Activities
Center
615 Montgomery Ave.
Narberth, PA 19073

Contact:

Lois Duffin
7411 Boyer Street
Philadelphia, PA 19119
215-248-3626
Tel Adams
P.O. Box 328
Devon, PA 19333-0328
610-687-5600

SANDPIPER ORCHID SOCIETY**Orchid Auction**

August 25
Mays Landing Library
Mays Landing, NJ 08330

Monthly Meeting

4th Thursday of every
month, 7:30pm
Mays Landing Library
Mays Landing, NJ 08330

Contact:

Judy Mutschler
2033 Philadelphia Ave.
Egg Harbor, NJ 08215
609-965-0048

SOUTH JERSEY ORCHID SOCIETY**Monthly Meeting**

3rd Sunday of every month
1pm
Wenonah United Methodist
Church
105 E. Willow St.
Wenonah, NJ 08090

Annual Orchid Auction

November 20, 1pm
Wenonah United
Methodist Church
105 E. Willow St.
Wenonah, NJ 08090

Contact:

Barbara Inglessis
204 Winding Way
Moorestown, NJ 08057
609-722-7037

SOUTHEASTERN PENNSYLVANIA ORCHID SOCIETY**Monthly Meetings**

2nd Wednesday — September
thru May
All Saints Episcopal Church
Gypsy Lane at Montgomery
Narberth, PA 19072
30 Call for info.

Orchid Auction

November TBA
Call for details

Contact:

Deborah Robinson
2604 Horseshoe Trail
Chester Springs, PA 19425
610-827-7445

PERENNIAL PLANT ASSOCIATION**Perennial Plant Symposium**

July 31 — August 5, Time TBA
Adams Mark Hotel
Philadelphia, PA
Fee: \$180.00 approximately — 3-day program

Contact:

Dr. Steven Still
3383 Schirtzinger Rd.
Hilliard, OH 43026
614-771-8431

AMERICAN PRIMROSE SOCIETY, DORETTA KLABER CHAPTER**Plant Sale**

June TBA

Contact:

Dot Plyer
18 Bridle Path
Chadds Ford, PA 19317
610-459-3969

AMERICAN RHODODENDRON SOCIETY, GREATER PHILADELPHIA CHAPTER**Exhibit at the Philadelphia Flower Show**

March 6-13
Philadelphia Civic Center
34th & Civic Center Blvd.
Philadelphia, PA 19104
Admission to Flower Show:
\$11.50

Plant Sale

May 7, 10-4pm
Morris Arboretum of the
University of
Pennsylvania
100 Northwestern Ave.
Philadelphia, PA 19118
Gate fee rebate with
minimum \$20
purchase

Contact:

Howard H. Roberts
1319 Wendover Rd.
Rosemont, PA 19010
610-525-4731

AMERICAN RHODODENDRON SOCIETY, VALLEY FORGE CHAPTER**Flower Show at Longwood Gardens**

May 15, 1-5pm

Plant Sale

April 30, 9-3pm
May 1, 11-3pm

Contact:

Eva Jackson
730 Limehouse Road

Longwood Gardens, Main

Conservatory
Kennett Square, PA 19348
Longwood Admission: \$10.00

Jenkins Arboretum

631 Berwyn-Baptist Rd.
Devon, PA 19333
610-647-8870

Radnor, PA 19087

610-687-2289

AMERICAN ROCK GARDEN SOCIETY, DELAWARE VALLEY CHAPTER**Spring Garden Tours**

May 14, 10-7pm
Call for details
Various members & friends
gardens in Bucks County
Fee: membership

Plant Sale

June 11, 9am
Robbins Nature Center
Ambler, PA
members only, join on
sale day

Contact:

Michael Slater
RD 4, Box 4106
Mohnton, PA 19540-9522
610-775-3757

DEL-CHESTER ROSE SOCIETY**Del-Chester Rose Show**

June 11, 1pm, entries 6-10am
Longwood Gardens
Kennett Square, PA 19348
Longwood Admission: \$10.00
No fee for exhibitors

Rose Pruning**Demonstration**

April 2, 10am
Memorial Rose Garden
St. Maximilian Kolby
Church
15 E. Pleasant Grove Rd.
West Chester, PA 19382
(behind Westtown
Township buildings)

Contact:

Pam Coath
1632 Lark Lane
Villanova, PA 19085
610-525-9948

PHILADELPHIA ROSE SOCIETY**48th Annual Rose Show**

June 5, 1-5pm
Roses entered 7-10:30am
Open to public 1-5pm
Widener Education Center
Morris Arboretum of the
University of
Pennsylvania
Philadelphia, PA 19118
Gate fee: \$3, free to exhibitors

Spring Pruning**Demonstration**

March 26, 1-3pm
Rain date March 27
Morris Arboretum Rose
Garden
100 Northwestern Avenue
(entrance)
Philadelphia, PA 19118

Contact:

Mrs. Pat Pitkin
923 Springwood Dr.
West Chester, PA 19382
610-692-4076

Fall Rose Dig & Sale

November 5, 1-3pm
Widener Education
Center
Morris Arboretum of the
University of
Pennsylvania
Philadelphia, PA 19118

DELAWARE VALLEY WATER GARDEN SOCIETY**Pond Tour**

July 17, 12-5pm,
Details TBA
Potluck lunch to share
Members & prospective members only

Contact:

Fred Weiss
DVWGS
966 E. Baltimore Pike
Kennett Square, PA 19348
610-667-7545

INTERNATIONAL WATER LILY SOCIETY**10th International Water Lily**

Society Symposium
July 28 thru August 8
Wessex Conference Center
Sparsholt College
Winchester, England
Fee: TBA

Contact:

Dr. Edward Schneider
Santa Barbara Botanic
Gardens
1212 Mission Canyon Rd.
Santa Barbara, CA 93105
805-682-4726

BOWMAN'S HILL WILDFLOWER PRESERVE**Wildflower Weekend**

May 14 & 15, all day, both
days. Evening program,
May 14

Spring Plant Sale

May 7 & 8, 10-4pm both
days
Bowman's Hill
Wildflower Preserve
Route #32, two miles
south of New Hope,
PA

Members: \$20/day, \$35/both
day. Non-members:
\$25/day, \$45/both days.
Route #32, two miles south of
New Hope, PA

Contact:

Tom Stevenson
Bowman's Hill Wildflower
Preserve
Washington Crossing
Historic Park
P.O. Box 103
Washington Crossing, PA
18977
215-862-2924

Additional Plant Society Information

For list of other local and national plant society contacts, check with the
Pennsylvania Horticultural Society Library (215-625-8256).

For Future Listings

Green Scene publishes a list of area plant society meetings and plant sales
annually in the March issue of *Green Scene*. DEADLINE: October 30. Please
follow format used here. Write to: Editor, *Green Scene*, PHS, 325 Walnut
Street, Philadelphia, PA 19106-2777.

Polly Hill: The Passionate Plantswoman

 by Melinda L. Zoehrer

Polly Hill will be the Honorary Chair of the Delaware Center for Horticulture's Rare Plant Auction, held on April 29 in the conservatories at Longwood Gardens, Kennett Square, Pa. The auction affords an opportunity for Delaware Valley gardeners and other plant enthusiasts to learn about and bid on unusual and hard-to-find plant gems. Hill's many contributions to the horticultural world have earned her enthusiastic praises and make her an ideal choice for Auction chair.

Polly Hill's work with plants fulfills one of her life's great passions. What began with \$1 a year on seeds, mostly for annuals, and a few vegetables" in her small, but choice city garden in Wawaset Park, Delaware, persists at her family's Barnard's Inn Farm on Martha's Vineyard in North Tisbury, Massachusetts. At 86, Hill continues to do what she has been doing best for the past 36 years — growing, observing, selecting, and introducing superior garden plants.

Polly Hill, who grew up in Pennsylvania and majored in music at Vassar College, traveled to Japan in 1929 to teach English for two years at Vassar's sister college, Tokyo Joshi Daigaku. While she spoke no Japanese and remembers having a difficult time, she says Japan played a pivotal role in her horticultural life. Determined to reach her students, she began "to study the way they studied," and took up flower arranging to do so, which impressed upon her the importance of form, the contrast of shapes, textures and silhouettes, rather than color.

Japan fortified its role in 1956 when she returned to Japan with her son Jefferson and met Dr. Tsuneshige Rokujo, whose avocation is hybridizing *Rhododendron* species. After she returned to Barnard's Inn Farm, Dr. Rokujo began sending Hill seeds, among them his crosses of *Rhododendron nakaharae*, a low-growing evergreen azalea known for its desirable prostrate form. These crosses form the basis for most of the 22 North Tisbury azaleas she introduced.

Barnard's Inn Farm on Martha's Vineyard, in North Tisbury, Massachusetts, is the site of Polly's horticultural passion. She and her husband, Julian (after whom she's named a Magnolia), took over the family farm 35 years ago, following the death of her mother. There she embarked upon her interest in horticulture. Shuttling back and forth between her winter residence in Wilmington, she began with courses in botany, taxonomy, and plant pathology at Longwood Gardens and the University of Delaware. At the Farm, her horticultural focus became "growing an arboretum from seed," an approach that would yield a greater melange of genetic material. Her goal was and continues to be the selection of superior forms of garden plants hardy



Clematis 'Starfish' cascading over a rock wall at Polly Hill's farm in Martha's Vineyard.

for Zones 5 and 6. Her work has led to the introduction of more than 60 new ornamentals.

My association with Polly began when I called her to ask if I could obtain a slide of one of her introductions, *Clematis 'Starfish'*, to use as the cover illustration of the Delaware Center for Horticulture's Rare Plant Auction catalog. She quickly obliged.

When I arrived at her home in Delaware, Polly immediately got down to business. Her studied approach to the "growing of an arboretum from seed" speaks of a person who has long practiced and been devoted to her art as a grower, introducer, and promoter of superior garden plants; her powers and patience to observe plants over time have guided her well. She showed me the first notebook that she began in 1958, recording facts about her very first plants: scientific name, provenance, quantity purchased, cost, year planted, and where they were planted on the Farm. What seemed remarkable to me is that her most current notebook looked quite similar to the first. The records in her notebooks are then transferred onto a permanent card file, which is maintained both in Delaware and in Massachusetts. Nowadays, she supplements both her handwritten notebooks and card file with a computer printout; but she says "my notebooks contain all the good tidbits."

A quiet, but resolute promoter of her plants, Polly does not sell seeds or cuttings,

preferring instead to give them away to nursery owners and plant distributors. She encourages them to propagate, distribute and promote her plants, both privately and commercially. Besides rhododendrons, the range of plants that she grows and evaluates is extensive and includes, magnolia, stewartia, Chinese dogwoods, clematis, junipers, crabapples, pine, and oxydendrum. While many of Polly's introductions have not made it into the nursery trade, she insists this isn't due to a lack of effort on her part. She says she has "to lure people in to see them and then persuade them they will make money." John Elsley, director of horticulture for Wayside Gardens, in a recent issue of *American Horticulturist* magazine, says Polly "has a good eye for selecting very good forms . . . and the fact that so few of her plants are available is not her fault, but that of the industry."

A former vice-president of the American Horticultural Society, Hill's many accolades include gold medals from the American Rhododendron Society, and a Distinguished Achievement Award from the Pennsylvania Horticultural Society, and a silver medal from the Massachusetts Horticultural Society. In 1990, she was honored with the Arthur Hoyt Scott Garden and Horticulture Award at Swarthmore College, in recognition of her work "in creating and developing a wider interest in gardening." And in 1993, the Chicago Horticultural Society presented Hill with its coveted Linnaeus

continued

photo by Polly Hill

Award, honoring her for "innovative contributions to the horticultural environment through selection and introduction of new plants, and for her continued caring and nurturing of public horticulture."

A choice selection of Polly's introductions will be featured at the Delaware Center for Horticulture's Rare Plant Auction on Friday, April 29. In addition to *Clematis* 'Starfish,' unique in its similarity to its namesake's shape with long tapered, reflexed white petals, other plants include *Cornus kousa* 'Square Dance,' notable not only for its unusual bracts that nearly form a square, but also for its abundant fruit production; and *Ilex verticillata* 'Bright Horizon,' selected for its impressive bounty of red berries set against dark green foliage.

Rare Plant Auction at Delaware Center for Horticulture

Everyone is invited to attend the Delaware Center for Horticulture's 14th Rare Plant Auction on Friday, April 29, 1994. The Auction and dinner benefit the Center's outreach urban horticultural program, the Greening of Wilmington, which assists with community gardens, street tree plantings, traffic islands and neighborhood gardening and conservation education.

Patsy Bussard is the chair of the Rare Plant Auction. Phil Normandy, curator of Plants at Brookside Gardens, will be this year's Celebrated Plant Expert for the Live Auction.

For information about receiving an invitation to the Auction, please contact the offices of the Delaware Center for Horticulture at (302) 658-6262.

Melinda Zoehrer is the horticulturist at the Delaware Center for Horticulture and coordinator of the Rare Plant Auction.

LETTERS TO THE EDITOR

Graterford Prisoner Story

I spent this morning at the prison with Matt Epps and members of the Episcopal Mission Congregation, many of whom participated in the gardening program last summer. I cannot tell you how proud these men are to see the article in *Green Scene* (Jan.); they are eagerly anticipating sharing the story with members of their families. You see, the gardens are located in a secured area of the prison which is inaccessible to visitors and many of the other inmates. Therefore, the article is the only way for outsiders and those inmates not involved in the program to learn about this wonderful program.

Dottie Noble and Bob Ferguson did a commendable job of capturing the essence of the program.

Inquires about gardening at Graterford can be referred to Nancy Bosold at Penn State Cooperative Extension, Montgomery County, (phone 489-4315).

I know the prisoners would welcome any copies of that issue of *Green Scene* when readers are finished with them. Donations of tools, plants, bulbs, money, etc. will of course be enthusiastically received. I can be reached at 256-9206.

Sandra Schultz
Master Gardener Volunteer
Harleysville, Pa.

The article on greening at Graterford Prison received rave reviews at our facility, Eagleville Hospital, a 189-bed hospital for the treatment of drug/alcohol addiction... We have a beautiful new greenhouse facility and an enthusiastic new horticulture therapist named Sue Weiser.

I sent the Graterford Prison story to Sue and she sent me back a note that said: "Wow! I surely believe in the magic of plants but I'm amazed by these gardens just the same. Thanks for the inspiration. I showed this article to the men in my therapy group. It was great to see how impressed they were."

I'm a nurse at Eagleville, but I also volunteer in the greenhouse each week. Sue and I have high hopes for the vegetable/flower and herb garden this spring.

Many of the patients we work with have never grown anything! They've never seen seeds! It's such a pleasure to help someone discover the joy of working with plants.

Thanks to Dorothy Noble, the author of this inspiring article.

Barbara Berger
Phoenixville



Another Bird Feeder Foils Squirrels

I was interested to see the Letters to the Editor note on a squirrel-proof bird feeder

in the November *Green Scene*. I imagine that many, maybe most, gardeners also feed birds in the winter time. I can't help but say that when we used to live in Lansdowne I finally perfected a feeder that was not only squirrel proof but also was City Hall pigeon proof.

Anyhow I thought that you might be interested in the enclosed contribution. This goes back about 22 years (and has been in use every year since then) when my son was a Boy Scout and needed to build a bird feeder for a Merit Badge. Over the years I have gotten on the mailing lists of many bird feeder companies but I have never seen anything like this.

1. Find a piece of tree branch about 3" in diameter. Cut off a section about 10" long.
2. Drill 7 or 8 holes 1" in diameter and about 1" deep and more or less equally spaced.
3. About 1/2" below each of these holes drill a 1/8" hole and insert 1/8" wood dowel to make a perch about 1 1/2" long.
4. Cut a piece of metal clothes hanger and bend it to make hanger for the feeder. Fasten to the log with small metal screws.
5. Fill holes with a half and half mixture of peanut butter and bird seed.
6. Hang this on your present bird feeder and watch. The very small birds, especially the chickadees will love this feeder.

John Hale
Bow Mar, Colo.

Successes at the Jersey Shore

I so enjoyed Barbara Bruno's article in *Green Scene* (July) as Cape May and Cape

May Point are my favorite places.

I was surprised and a little sad to see no mention of the Cape May Bird Observatory (P.O. Box 3, Cape May Point, NJ 08212). They have done so much to encourage local gardeners and I'm sending along a booklet prepared by Pat Sutton who knows so many gardeners in that area. The Suttons' garden is a butterfly and hummingbird paradise.

Jane Ruffin
Rosemont, Pa.

Night Blooming Cereus

I am a passer at the Philadelphia Flower Show, past president of Philadelphia Cactus & Succulent Society and a judge. I wish, with respect to a fine article on the night blooming cereus, to offer a correction. *Hylocereus undatus*, only one of many cerei that bloom at night, has no leaves. The leaf-like structure is all stem. What is propagated is the stem.

Milton L. Lonker
Philadelphia, Pa.

The correct scientific name of the plant pictured is *Epiphyllum oxypetalum*, admittedly an easy mistake since several different cactus species bear the same common name. The name given, *Hylocereus undatus*, is not a synonym either, it is a different species altogether which has a three-sided stem and is a much less suitable house plant.

Charles O. Cresson
Swarthmore, Pa.

John Van de Water of Mendham, N.J., also called the correction to our attention.

Books that Change the Way We Garden

The Richard Bitner roundup was splendid. I'm so jealous — wish I'd thought to do it myself. I loved every word.

Rebecca Pepper Sinkler,
The Editor
New York Times Book Review

I read with the greatest interest and pleasure *Books that Change the Way We Garden* (*Green Scene* Nov/Dec 1993).

I was particularly delighted to see represented by May Watts — *Reading the Landscape of America*; William Cronin — *Changes in the Land*; Wendell Berry — *The Unsettling of America* — signs that others are awakening (I am only slowly; having only read one of these) to the changes in our culture that have left us without as clear a cultural directive for the planning of personal and public gardens as has existed

in the past. The development tract house, the corporate park, and the open space available in the subdivision have neither the clear ecological nor cultural message that they used to. The latter is the most complex problem our young designers must face in developing an aesthetic for today — far more important than the ecological aspect which I believe is being overworked.

Of course, the most comfortable pleasure I got was seeing that V. Sackville West and Roberto Burle Marx who have been enduring, very personal touchstones for me had been for others, also. I guess it is not surprising that I had clung to a lot of the others for a moment and then passed on.

What a pleasure to have all of this so beautifully organized and passed before my eyes.

William H. Frederick, Jr., ASLA
Hockessin, Dela.

Thanks to Doctor Bitner for the truly superb article "Books that Change the Way We Garden." I can't wait for a huge snowfall so I can explore all the books I have just added to my list of **must** reading.

Bernita Buncher Balter
Pittsburgh, Pa.

Richard Bitner's piece on garden reading was a fine note.

Allen Lacy
Linwood, N.J.

Loved Richard Bitner's article on books. I'm sure everyone will want to add one or two to the list. All of V. Sackville West and all of May Sartor's are good.

Toni Brinton
West Chester, Pa.

I urge adding this book to important books about plants: *The Plant Hunters* by

Tyler Whittle, published by PAJ Publications. This excellently written book describes most of the plant hunters and expeditions in the 18th and 19th century and shows pretty clearly that, without heroism and arduous efforts of these people, modern horticulture as we know it probably wouldn't exist.

Edwin A. Peebles
Phoenixville, Pa.

Congratulations on the great article, *Books that Change the Way We Garden*, I really did enjoy it. Most of my favorite books were listed, but if you do run a follow-up article, I have a few more suggestions.

The American Mixed Border, Ann Lovejoy, Macmillan Publishing Co., New York, 1993, will, I feel, become a classic for admirers of English-style borders who now have a primer on how to create them in the American idiom and using appropriate plants.

The Garden in Winter, Rosemary Verey, Little Brown and Company, Boston and Toronto, 1988. This really focused my mind on planting and designing to extend the interest in the garden right into winter.

Finally, all the *Plants & Gardens*, *Brooklyn Botanic Garden Record* handbooks are exceptional, concise sources of information. In particular I was influenced by *The Winter Garden*, published by the Brooklyn Botanic Garden, Inc., New York, 1991. This arrived just as we'd finishing building a new garage and I was wondering how to plant the virgin garden bed next to it. I now have a flourishing "winter interest" bed there. *Flowering Shrubs*, Brooklyn Botanic Garden, Inc., New York, 1981, enabled me, while still living in Cape Town, to easily research really choice shrubs to plant in New Jersey once we moved there.

Helen du Toit
Pittstown, N.J.

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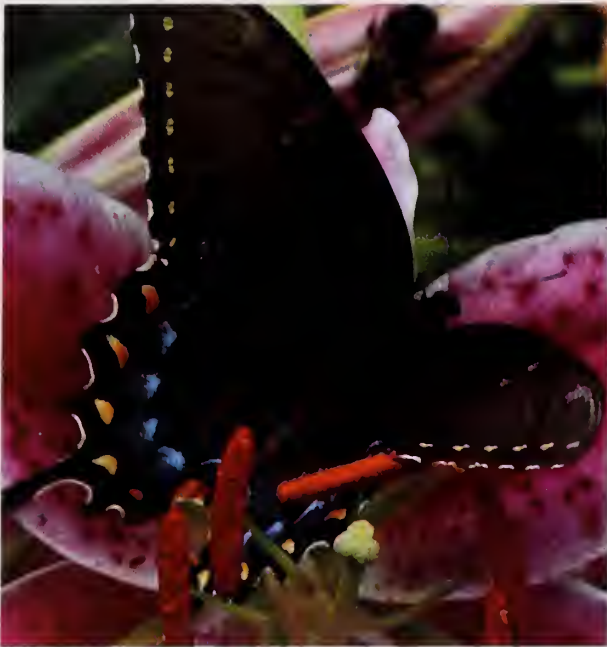


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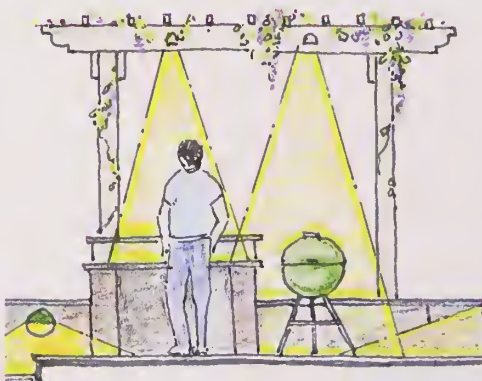
See page 7.



7.



22.



26.

Front Cover: A garden rescued from dereliction seven years ago, is full of unique areas: cutting gardens, resting places, an aviary, a formal garden and much more. The peacock, Mr. Beeps, who has run of the gardens, rests a moment on a handy bench. See page 7.

Front cover: photo by Sam Kenworthy



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CORRECTION:

In the March/April issue of *Green Scene*, in Betty Sparks's article "Salvias Extend Color Through the Seasons," the second sentence in the box on page 10 entitled **Richard Dufresne** should have read:

Dufresne introduced to the trade most of the plants that are discussed here.
The Editor

Volume 22, Number 5 May/June 1994

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the green scene / may 1994

ALL ABOARD!

by Barbara D. Brown

Garden railways: if you enjoy trains under your tree in December, here's a way to enjoy them in your garden on a larger scale and within a natural landscape.

continued on next page



Impatiens and cotoneaster provide a comparison of scale for this model railway set in an Easton, Pa. garden.

photo by Charles F. Sibre

ALL ABOARD!



photo by Barbara Brown

Above: The Thornton, Delaware County (Pa.) railway garden landscaped by the author is being laid out. First the mountain, lake and waterfall were set in place, then the tracks. Here workers experiment with plant placement.

Below: Inset of lake and tracks. The author used stone exclusively rather than bark mulch. The stone keeps down dust and lessens weed growth.

At right: The landscape has been laid in and begins to flourish. The station platform is "abuzz" with activity. A waterfall was set up by the rocks. Note different plant textures and shades of green. Dwarf cutleaf Japanese maple is visible beyond trestle.



photo by Barbara Brown



By far, the most interesting request for a landscape design I've received came from a couple in Thornton, Delaware County. They asked for a "mountain" with a tunnel, a "lake" and a "waterfall."

Where did they want them? Built in their suburban back yard. They didn't stop there, either. The "mountain" and "lake" edges were to be landscaped with hardy seasonally interesting plants, all in miniature. Thus I was introduced to railroad gardening.

Garden railways became popular in Europe during the 1960s. Initially, the trains were built by individual craftsmen. As the idea sparked hobbyists' interest, cars and solid brass track became more widely available especially in Germany. Small buildings, people, animals and equipment made of durable plastic also began to appear. The idea of model railroads has caught on to such an extent that many model railroading societies have been formed. Southeast Pennsylvania Garden Railroad Society in King of Prussia meets monthly. A Garden Railways Convention is held yearly with 1994 marking its 10th



photo by J. L. Ronat

anniversary. *Garden Railways* and *Outdoor Railroader* magazines caught the client's attention and sowed the seed that started the whole project.

The scale for these trains, G scale, is larger than the more common HO and O models; 1/2 inch equals to one foot. There are several other G scale model railroads nearby. Those in West Chester and Kennett Square are larger than the client's and are not contained within a boundary. Another one in Norton is 1,400 square feet and indoors. It runs through three rooms of the owner's home.

Since the G scale model layout is large it's a natural for outdoor setups. Trains and buildings can be located among miniature plants and restricted to small sections of the larger garden. Another method is to create a container for the whole layout, which is the way we proceeded.

Locally, you can find the most complete selection of everything for the model railroad at Nicholas Smith Trains on West Chester Pike in Broomall. Mitchell's Department Store, Rte. 202 in Wilmington, also carries a good supply. Car cost varies.

One playing the Coca Cola theme and another producing circus sounds, sell for around \$150. Locomotives can go as high as \$2,000 if they have sound and smoke. Brass track costs about \$4 per one-foot section.

We began this project by building a railroad tie container 12'x20'x3' high. Aggregate filled the bottom followed by topsoil for plants. Basically, it was a raised bed for easy maintenance and train operation. The client designed and put down a winding loop and passing track. Remaining installation started almost immediately following completion of a detailed plan. As with any project, we built constructed features first — mountain, lake and waterfall, and then planted.

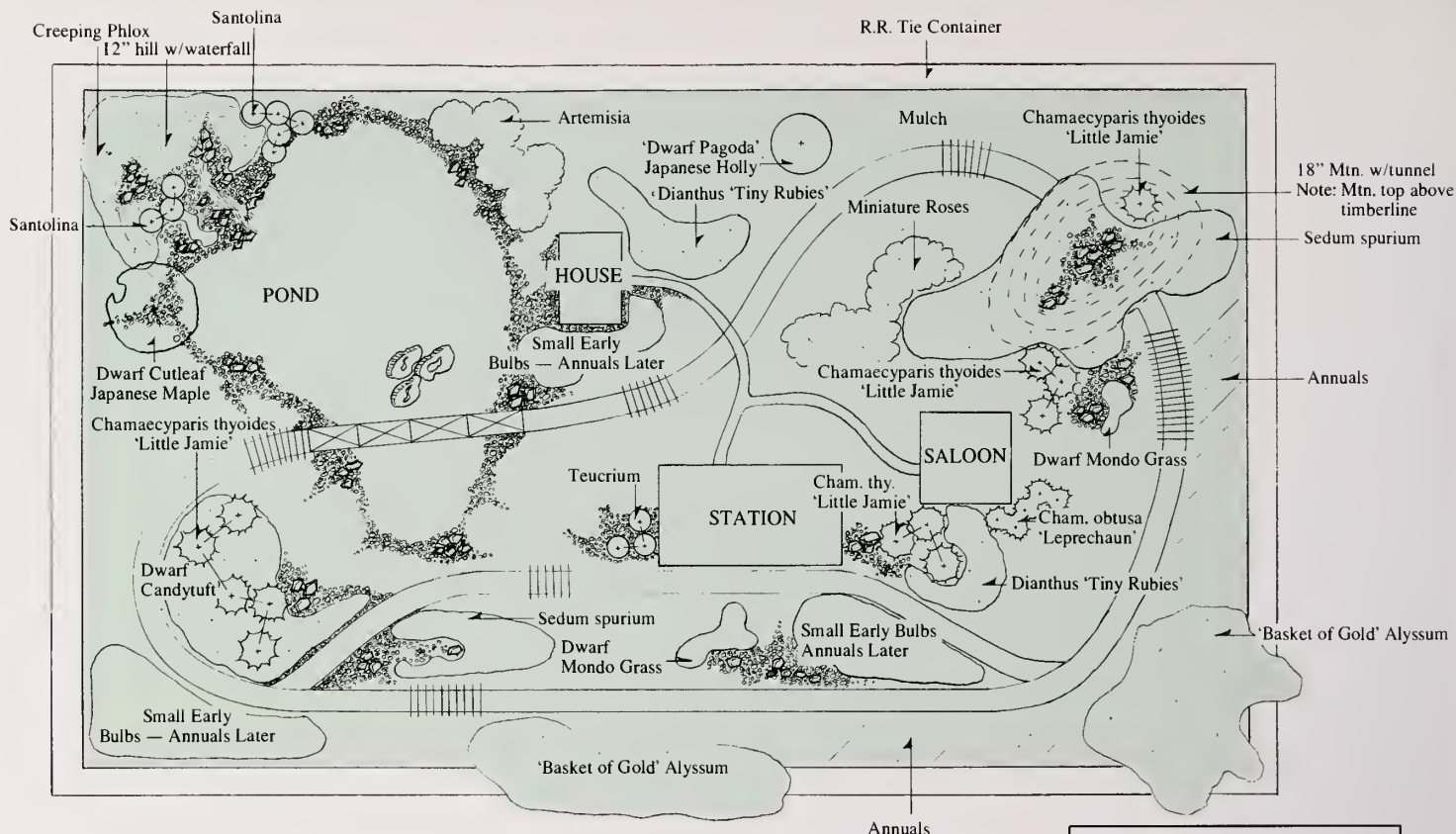
During the design phase we had to constantly keep scale in mind because the size of the "lake," and especially plants are not static and may change. Selecting and finding appropriately sized plants was hardest. I needed a variety of plants just as one does in a full-sized garden. I looked for everything from perennials and groundcovers to deciduous and evergreen shrubs

and trees. I scoured nursery catalogs and found dwarf perennials that seemed worth a try. I designed mass plantings of needled evergreens, creating a "forest" of *Chamaecyparis thyoides* 'Little Jamie.' Unfortunately, I could only find one 'Little Jamie' large enough for the grower to sell (5 inches) and had to wait for the rest of my "forest." Miniature roses were used as deciduous flowering trees. A very dwarf cutleaf Japanese maple was my one real tree. It will take a little pruning to maintain proper scale.

I selected particular plants for particular reasons. Evergreens provide winter interest. Even though the train doesn't operate then the garden must look presentable since it's visible from the house. Plants such as *Chamaecyparis*, Japanese holly, candytuft and creeping phlox provide interest during winter.

No garden is complete without flowering plants and as small as this garden is, it has a good share of them. *Dianthus* 'Tiny Rubies' covers itself with rosy red blossoms. Candytuft has pristine white ones. Miniature roses flower all summer. Just as in a full-sized

continued



garden, we placed plants for screening — miniature roses; plants as groundcover on steep hills — sedum; plants as features — cutleaf Japanese maple and Japanese holly 'Dwarf Pagoda.'

We used several types of stone: road ballast, an inexpensive angular material, under all track; larger angular stones around the "lake" and for the waterfall; flattish concave stones to provide the kind of splash we wanted. We mulched the entire garden with red shale to cut down on weed growth and because it looked right in a railroad setting.

How to build the tunnel was another challenge. Curved tunnel track was laid before the "mountain" was built. During construction we constantly checked to be sure the train had sufficient clearance to get through without brushing the inside tunnel walls. We used curved reinforcing bar topped with hardware cloth, then landscape fabric and finally soil. The fabric prevents soil from washing down onto the track. This system seems to be working just fine.

Our railroad garden, as with all gardens, is indeed an experiment. Some plants will

DESIGN FOR RAILROAD GARDEN

on pages 4 & 5

DESIGN — BARBARA D. BROWN
HERITAGE GARDENS

thrive. Some will be less vigorous. Some may be so vigorous they will have to be removed. Pruning will be necessary. Leaves from nearby deciduous trees will cover the tracks in fall.

According to the client, the garden has been a resounding success. Parties have been planned with the miniatures as showpiece. Model railroaders have come to view it when blossoms were at their colorful best. Neighbors have stopped by to see the show. One visitor was most unexpected. The client explains: "One day while my granddaughter and I watched, the train derailed in the tunnel. We reached in and reset the train and were surprised to see a giant toad lead the train out of the tunnel. Needless to say he went off in search of a safer habitat."

The only problem we now foresee is expansion. As with any hobby, little things lead to bigger things. Last spring I got a call from the client with a request to enlarge his deck with model railroading in mind. The point was to stretch it to within a trestle width of the railroad garden. Presto, we had an additional 300 or so square feet of play space.

Barbara Brown is a landscape designer with Heritage Gardens in Mendenhall, PA. She is a graduate of Temple, Ambler's landscape design program and is a PA Accredited Nurseryman.

For More Information

Southeastern Pennsylvania
Garden Railroad Society
706 Jonathan Drive
King of Prussia, PA 19406

Contact:
Steve Wolfhope
610-265-5310

Magazines

Garden Railways
P.O. Box 61461
Denver, CO 80206
bimonthly \$21

Outdoor Railroader
Westlake Publishing Co.
1574 KerryGlen St.
Westlake Village, CA 91361
\$21

Shops

Ardmore Hobbies
Ardmore West Shopping Center
19A Woodside Rd.
Ardmore, PA 19003

Mitchell's Inc.
2119 Concord Pike
Wilmington, DE 19803
302-652-3258

Nicholas Smith Trains
2343 West Chester Pike
Broomall, PA 19008
610-353-8585



The Garden, a Canvas: The Gardener an Artist

by Cheryl Lee Monroe

"I view my entire property with passion, as an artist views his canvas or a sculptor his clay. I think of it in its entirety, a complete canvas; it must flow, allure, captivate. It must do so with color, texture, shapes, forms, light." Sam Kenworthy



photos by Sam Kenworthy

7

"A garden is man's idealized view of the world."

continued

An elegant pool, the pink of May's azaleas and Rosy, having carte blanche in the garden, is fully aware of the best spot in this magical place.

The Garden, a Canvas: The Gardener an Artist

photos by Sam Kenworthy



Before (top): House and garden shortly after it was purchased.

After (bottom): Kenworthy's first labors included clearing vines and saplings from the area closest to the house making way for the transformation to patio, lawns and garden.

Inviting paths, corners that insist we peer around them, subtle surprises, intrigue. Mystery, exploration and discovery are touted by fine gardeners and authors as essentials in the creation of a garden. Whimsy, allure, vision, art: elements Sam Kenworthy strives for in creating his own magical world — Meadowbloom, his five-acre garden, tucked away in Chester County. Enchanting, it bears the stamp of Kenworthy's character, love and hard work. Kenworthy brings a rich background to his garden: he grew up on a farm; went to art school; was a flower designer who once owned a flower shop. He builds his life around his garden and his art.

To Kenworthy the artist, composition is critical; to Kenworthy the flower arranger, color and variety in the cutting garden are critical. It is no small feat to balance one's love of flowers with the aesthetics of a garden. Meadowbloom's old trees and shrubs allow this garden the grace of age and structure, a foil for the exuberance of its flowers.

It is a gift to happen upon an old garden, its "bones," those tall, tall old trees, evergreens and shrubs already in place. Creating a garden from scratch leaves one longing for those elements of good design: plants large enough to create the backbone, preferably, older trees, evergreens, hedges, and shrubs. Mature plants, however, are characteristic of older gardens, gems to inherit if you can bear the task of renovation.

Seven years ago Kenworthy found Meadowbloom, so overgrown only small paths necessary for access cut through five acres of undergrowth. The old stone house and outbuildings were derelict; but Kenworthy fell in love with the trees, the land, the privacy, the potential. He looked past the mess to lush ferns, pachysandra, hosta, azaleas and grand old trees, evergreens and shrubs cloaked in the tangled growth of bittersweet, wild roses, saplings, honeysuckle and poison ivy.

"My challenge," notes Kenworthy, "was to turn five acres of jungle into one cohesive garden. I was limited only by my imagination and budget."

Meadowbloom's former owner had either vision or tons of enthusiasm because today spruce, cedars, elms, ash, oak and poplar, all easily 90- to 100-foot tall, thrive there. Majestic American hollies, azaleas, a glorious styrax, Japanese maples, and a cherry tree, all spectacular in size, wear well the ravages of time.

In *The Essential Earthman*,* Henry

**The Essential Earthman*, Henry Mitchell, Indiana University Press, Bloomington, IL, 1981

Mitchell writes, "Defiance . . . is what makes gardeners." After seven years of labor, Kenworthy, defying nature's course, has recaptured the garden and the splendor of the older plants, creating a garden brimming with flowers, vegetables, annuals and his own selection of trees and shrubs. The paths and flower beds weave amidst

The aviary is appointed with elegant roosting places and topped with another of Kenworthy's creations, a chandelier and one of his angels.

the old trees, the evergreens and the shrubs. Kenworthy's goal for the older plants was to have them "serve as the living newel-posts about which my gardens would eventually wind in flowery profusion."

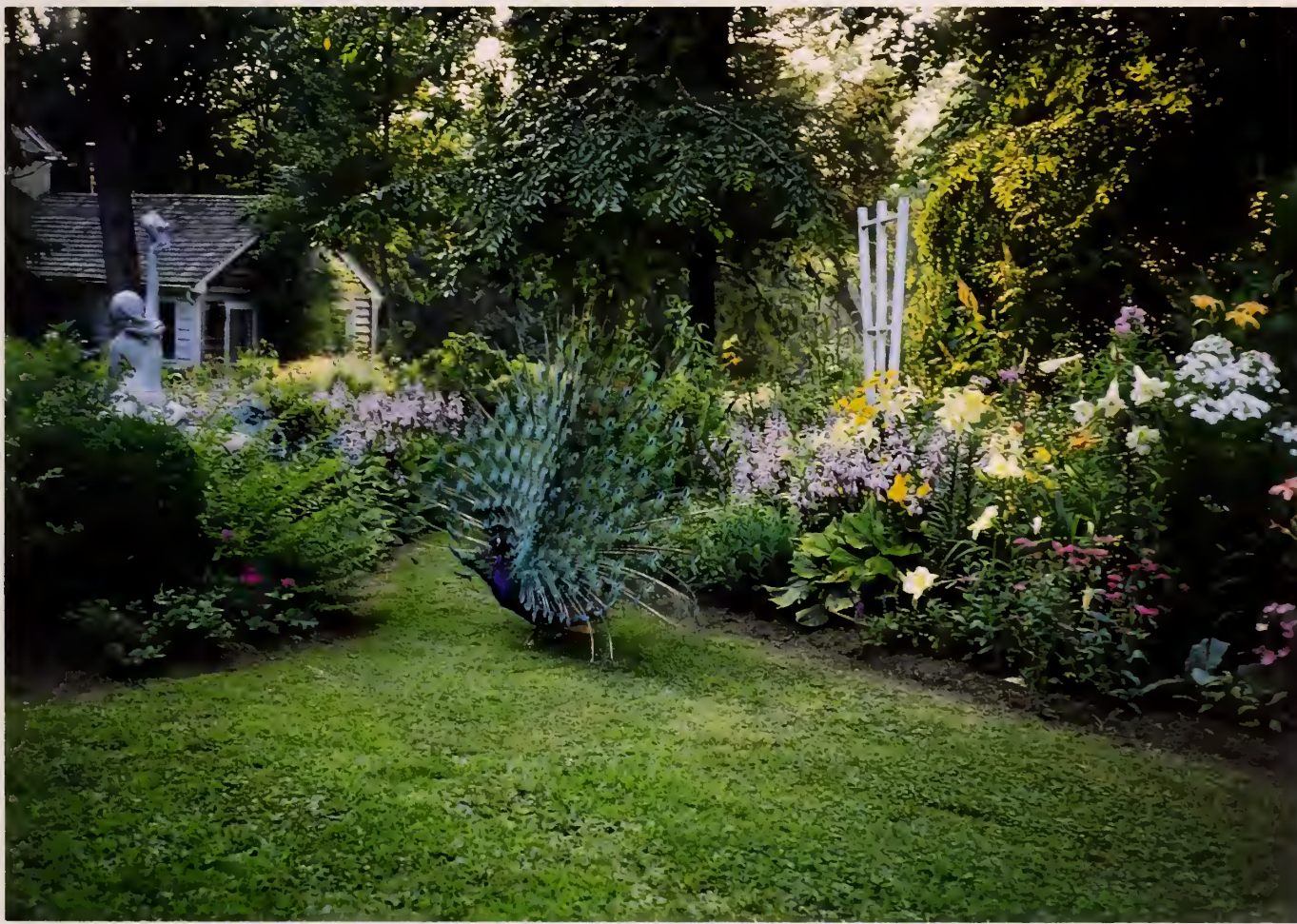
The flowery profusion starts with spring and clouds of pink atop the old 75-ft. cherry, its backdrop hundreds and hundreds of bulbs, mostly white narcissus. Kenworthy uses white plants freely to calm the eye amid the riot of flowers and to strike a balance with the large trees and the semi-shade they cast: viburnums, azaleas, rhododendrons, lilies, *Buddleia* and hibiscus. Lilies, the majority white also, are oriental, tiger and Asiatic; *L. 'Casa Blanca'*, his favorite, carries plate-size blooms.

Rhododendrons, again predominantly white (*R. 'Cunningham's White'*), are splashed and grouped here and there with an occasional red *R. 'Vulcan.'* White helps downplay Kenworthy's horror of "polka dots," those assorted old azaleas sprinkled around by the former owner. Admire the white, pink tulips arise from pink lily of the valley and all manner of summer annuals and perennials, thistles, daylilies, rudbeckia, sunflowers, asters, foxgloves, and zinnias burst forth in color.

Inheriting the bones of an old garden and earlier experience in developing one taught Kenworthy his own first selections should be "bones" too. Perennials and annuals ebb and flow as the garden has matured. Early selections included *Cercidiphyllum japonicum*, *Cercis canadensis*, flowering cherries, lots and lots of hydrangea, cherry laurels, azaleas and rhododendrons.

The large inherited trees reached heights that enabled Kenworthy to garden under, amidst or within their boughs developing his own sense of adventure. He has introduced discoveries, surprises and fun, believing some aspects must be contrived to capture our attention in a garden. Morning glories climb among giant boughs (strings guiding their paths); a fountain resides on

continued



Top left: Kenworthy's spring garden breaks into a riot of colors — the main chorus contributed by rhododendrons and azaleas with the new foliage of ferns to ensure harmony. **Top right:** An aviary, a painted corn crib, houses exotic chickens, pheasants and doves. **Bottom:** Mr. Beeps struts his stuff on one of the garden paths. The paths are crafted to curve around, extending to visitors an invitation and promise of more to come.



the stump of an old apple tree; garden benches crafted from old doors emerge just when needed; angels cut from tin herald your arrival; pillars and pots, furniture, a pergola, statuary and peacocks enchant the way.

Kenworthy constantly ponders the interest needed to provide a garden with pizzazz. My favorite delight is his aviary, exquisitely placed, beautiful, lighthearted and busy, birds being incredibly active creatures. Winding one's way past a springhouse and entering the woods, you head around the outskirts of the property. The wooded area,

Left: Pogo, free to roam all summer, explores an idyllic place, a composition amidst the semishade of the evergreens, an angel surrounded by hosta, impatiens, lilies, and cherry laurel. **Below:** The back patio is a stage: containers and windowboxes awash in geraniums, vinca, hibiscus, and salvia envelop a variety of places to sit, changing your perspective as you change seats.



an old stand of poplar, brims with sweet rocket, ostrich fern, mertensia, foxglove, and understory trees: birch, redbud, dogwood, and serviceberry.

Conscious of the wandering minds of guests, a surprise was in order along the trail. As you round a corner, a recycled and handsomely painted corner house exotic chickens, pheasants and doves. Stunning chinese, golden, amherst and silver pheasants, Silkie chickens and doves roost. The aviary is appointed with elegant roosting places crowned with a chandelier Kenworthy found in an old church, inverted

The garden is filled with wild and domesticated birds, not all caged, and other animals. They are his family, provide constant companionship and are as much a part of the garden as the plants. His feathered friends, two peacocks, a chicken and a turkey, also have the job of bug gobblers. The three dogs and two cats keep larger varmints at bay.

Open to Exploration

Sam Kenworthy welcomes groups to the garden. Tours can be arranged in mid-May and mid-July by special appointment; call Kenworthy at 610-495-5187.

A Passion for Cutting

Kenworthy chooses the following for his neverending selection of flowers for cutting. They are available from Thompson & Morgan, P.O. Box 1308, Jackson, NJ 08527-0308, 908-363-2225.

Annuals

Cosmos bipinnatus 'Psyche'
C. b. 'Sonata'
C. b. 'Daydream'
C. b. 'Sea Shells'
Cynara cardunculus (Cardoon)
Helianthus annuus (Sunflowers)
H. a. 'Valentine'
H. a. 'Lemon Queen'
H. a. 'Italian White'
H. a. 'Velvet Queen'
H. a. 'Sunburst Mixed'

Biennials

Larkspur ajacis 'Giant Double'
Hyacinth Fl. Mixed

Perennials

Lilium regale
Verbascum chaixii var. *album*

and topped with a tin angel.

The garden is filled with wild and domesticated birds, not all caged, and other animals. They are his family, provide constant companionship and are as much a part of the garden as the plants. His feathered friends, two peacocks, a chicken and a turkey, also have the job of bug gobblers. The three dogs and two cats keep larger varmints at bay. Amazingly, deer are not a nuisance; in fact, they are absent from his garden. The undamaged *Hydrangea quercifolia*, 6- to 8-ft. tall, testify to the deer's absence, since the hydrangeas are the chef's special when deer dine. Sam attributes their absence to the animals and his own constant presence in the garden.

All the garden is a stage; Kenworthy, the master of theatrics. This living painting promises to be his masterpiece, and there is more to come. Amidst the profusion are formal touches, e.g. standard *Corylus avellana* 'Contorta' (Harry Lauder's walking stick), topiary junipers and azaleas, draw the eye up and around the garden. Desiring to continue stretching, Kenworthy removed three large old black pines (*Pinus thunbergiana*) at the back of the house, clearing a place for a formal garden. The new garden will not be stuffy, rather a splash to add interest; complete with boxwood, water, fish, terraces and the sky. Those "old bones," the very tall trees, have a drawback; they obscure the sky and Kenworthy longs for the sun, clouds and stars.

Oh, there is the meadow, home to the hordes of sunflowers from white to bronze and multiheaded, and loads of zinnia, lavender, cosmos, thistles, more hydrangea and curly willow. All for cutting! There are fruit trees and raspberries, a large vegetable garden as well as space for a new greenhouse. There is little if anything missing.

Kenworthy has created a garden whose essence flows into his livelihood, his spirit, his "bones."

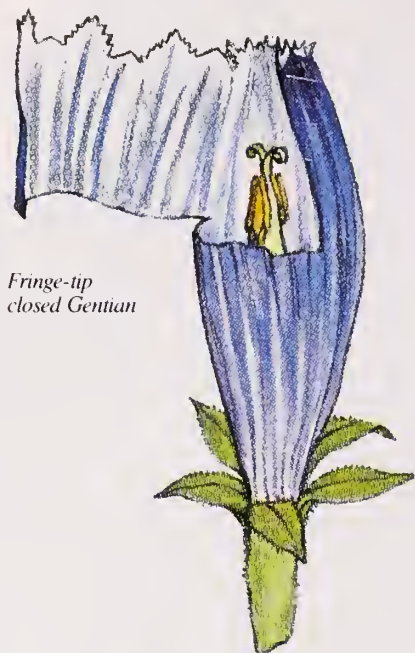
"A garden is man's idealized view of the world," wrote Derek Clifford in *A History of Garden Design*.** And Kenworthy's view has few limits: "It takes time and energy to do it, one must love it, and then, pretty soon you are consumed by the whole project," is how he explains it. And Kenworthy is indeed consumed, intent upon this life, this garden.

***Plants in the Landscape*, Carpenter, Walker, Lanphear, W.H. Freeman & Co., 1975, pg. 13.

Cheryl Lee Monroe is a writer whose own elements of good design are family and flowers.



Kenworthy harvests those flowers he needs for parties and weddings from his garden. Cosmos, zinnia, hydrangeas, lilies, cleome and rudbeckia demonstrate summer's abundance for cutting.



Fringe-tip
closed Gentian

The Great Gentian R

by Adra Fairman

A news story about the Stony Brook Garden Club's contribution to the Princeton area's Open Space Preservation Committee brought the Club a serendipitous new conservation project: the saving of a large stand of the rare fringed bottle gentian (*Gentiana andrewsi*).

Here's how it happened. The possessor of the patch of gentian, a woman in her mid-80s, has life tenancy on the property where she has lived most of her life. She knows that the owners of the adjacent stone quarry will move in as soon as she goes and will undoubtedly tear down her family farmhouse to mine the valuable rock that lies underneath. This woman is a knowledgeable gardener and the fate of the gentian, sometimes called fringe-tip closed gentian, worried her considerably. When she saw the story about our Club's support of the Open Space Preservation Committee, she called one of the members in the news photo to see if we might be able to help her.

At her request, several of us went out to her farm. We were awed by the bright blue of a small bed of gentian she had moved close to her house from the large patch in her upper meadow. When we went to inspect the larger stand, which flourishes in a rather wet, upland meadow, we were even more impressed. Nearly 200 square feet of semi-shaded former sheep pasture contained a gorgeous blue gentian plant every 18 inches or so. We were overwhelmed by the sight of such a treasure.

This rare fringed bottle gentian bears a cluster of club-shaped, gentian blue flowers surrounded by a collar of slender pointed leaves. Frequently, several other blossoms appear in the axils of the lower leaves as well. The flowers are lobed and fringed between the lobes but you can see this only when they open slightly, which they seem to do when cut and brought into a warm room. They are also faintly striped. They bloom in September and well into October

and last two weeks in water when cut. The gentian blue color dazzles.

Gardeners' instinct vs. experts' advice

Our first visit took place in September. At our new friend's request, we marked the individual plants with stakes so we could move some of them the following spring. One of the wildflower books we consulted said to "move in fall" but our gardener's instinct said to wait until spring. After all, you rarely move anything when it's in full bloom. I took one plant at that time as an experiment, potted it up and planted it in my garden but the rest we left to take the following May.

I planted my specimen behind a rain down-spout so it would receive plenty of moisture but not be washed out. The Mercer County Agricultural Extension Agent Barbara Bromley, whom we consulted about the project, suggested that location. We felt even more elated about our find when she told us she knew of no other stand of fringed bottle gentian in the state of New Jersey. She was as thrilled as we were about our discovery and has been most helpful throughout the project. Stony Brook Garden Club members joined in the project with great enthusiasm; 18 members indicated their eagerness to take a plant to try to preserve it. Six months later, even after a brutally dry summer, most of the plants we had distributed did survive.

Before digging the plants, we made some preparations to enhance the plants' chances of survival. First we took a sample of the soil at the site and had it treated by Barbara Bromley. It came back with a surprisingly acid pH of 4.0. We then bought aluminum



Pine-barren
Gentian

Rescue

sulphate and prepared a bucket of soil of equal acidity to use to pot up the transplants. A simple soil test kit proved sufficiently accurate to accomplish this. County Agent Bromley warned us not to overdo this aspect of our preparation as pH is not incremental; each number is twice as acid or alkaline as the preceding one. She also advised us that this particular gentian is not too fussy about pH. Most gentians require boggy and acid conditions. The Pine Barrens gentian (*Gentiana autumnalis*) thrives in the highly acidic, sandy soil of

One of the wildflower books we consulted said to "move in fall" but our gardener's instinct said to wait until spring.

New Jersey's Pine Barrens.

Everything we read seemed to say that moisture and peaty soil were crucial. Consequently we potted the plants with a lot of the acid soil around them and warned our members to be sure to water all summer. We dug the plants in May and distributed the potted plants shortly thereafter. Our first attempt to dig was frustrated because we had underestimated how difficult the digging would be and the size of the root ball we would have to take. The soil in which the plants grew turned out to be a tough mixture of years of accumulated turf, turned into humus, and a wet, grey clay lying underneath it. We tried again, using six-inch pots in place of the smaller ones we had been struggling with originally. The six-inch pot gave us room to take a good root ball and to pack quite a lot of our prepared, acid soil around the individual plants.

We visited our benefactor again this fall to mark more plants for removal. We have a waiting list in the Club. We have driven tall stakes so we can thread red ribbon around the whole plot to warn away predators. The main predator is the gang from the quarry who cut the grass; in spite of repeated pleas to leave the area alone, the last mowing crew cut a wide swath through the heart of it. Fortunately, the plants have begun to reappear. How resilient nature is;



photos by Janet Haring



Top: Upland meadow, site of the rare gentians, about 200 sq. ft., staked and roped off to prevent mowing. **Bottom:** Each plant is marked with slim green stakes to be transplanted next spring.

even these rarities have that marvelous ability.

On our last visit, our fifth to our friend, she mentioned rather diffidently that in the past she had noticed gentian growing in another of her fields across the road from her house. Since the field was mowed regularly without protest from her, she doubted they had survived. We decided we'd take a look anyway. When we crossed the road to the other field, we discovered, to our amazement, another 25 to 30 plants. Indeed they had been mowed, but there they were: thrifty, quite short, mostly five-

inch plants rather than the 12- to 14-inch height to which they normally grow. They were loaded with blooms.

My colleague turned to me with a wild look in her eyes and said: "What are we going to do?" The thought of potting up all these as well was daunting at the moment. We will do something, however; the thought that these rare beauties should go to waste or be destroyed is abhorrent to us.

Where they'll be transplanted

We plan eventually to establish a stand of the fringed gentian on the grounds of Rockingham, Washington's Headquarters, 1783, in Rocky Hill, New Jersey. However, we expect this historic house to be moved a mile or so from its present site to a new locality within the next few years. This new location will require that we plant and plant all new gardens, so we look forward to incorporating the gentian into the new environment. The timing of the move is still uncertain, and we intend to wait until the house and landscaping are established in their new spot before we risk moving these somewhat temperamental plants. Eventually, when we start to settle the gentian at Rockingham, we may use some of the plants our members are now growing or we may simply dig up as much as we can of the original plot we discovered so luckily — if they are still there. Everything depends on the timing.

Adra Fairman is a member of the Princeton Area Committee of the New Jersey Environmental Federation. She is also a trustee of the Rockingham Association.

A Country Garden

An idea whose time has expanded  by Duane Campbell

A City Garden Contest Inspires A Country Garden Contest

The Pennsylvania Horticultural Society's **City Gardens Contest** gives the city gardeners recognition for their skillful and imaginative gardening and offers them the opportunity to compete for prizes in several categories.

As many as 560 gardens from across the city of Philadelphia compete annually. Their gardens range from tiny windowboxes to community lots, some the size of an entire city block. An army of 400 volunteers assembled in teams, serve as judges visiting each garden entry. In the fall, 500 winners and well wishers gather to celebrate the harvest and their successes; they cheer, they stomp, they hug, they receive prizes and then they appropriate ideas from one another.

In the following article, Duane Campbell reflects on the pilot Country Gardens Contest. A spin-off of Philadelphia City Gardens Contest, this rural endeavor demonstrates that a few hundred miles can literally be worlds apart. Who won and who didn't is not as fascinating as how the game was played and who was playing it. Enjoy this glimpse of gardening by our country cousins.

The **Country Garden Contest** was the brainchild of Robert S. Ryan. Bob served two decades on the Council and Executive Committee of the Pennsylvania Horticultural Society and was chair from 1984 to 1988.

Bob emceed the awards luncheon held in Towanda, Pa., attended by all five winning gardeners described in the article. The Grand Prize winner received \$100 as well as a special certificate and a membership in PHS. Winners in each category received a certificate and complimentary membership.

The second annual Country Garden Contest will be expanded to include Susquehanna County. Applications are available now through Betsy Gullan at the Pennsylvania Horticultural Society, garden clubs and at major garden centers.

*Participate in Philadelphia's
City Garden Contest
as a contestant, a judge,
or both.*

For more information contact:
Flossie Narducci
The Pennsylvania Horticultural Society
325 Walnut Street
Philadelphia, PA 19106
(215) 625-8280

To say that Sullivan County is small is like saying that Buckingham Palace is cozy. The county's 6,104 residents live mostly outside the county seat. Laporte (population of 451), so this area is mainly well, let's say exurban. To add a more metropolitan flavor, adjacent Bradford County was added to the field, a county with fully 60,000 people arranged around a megalopolis of five towns, three of them with more than 4,000 inhabitants. Each!

Even with the addition of this more urbane county, the Pennsylvania Horticultural Society judge experienced some culture shock. Doeskin casuals designed for the manicured turf of the Main Line stepped carefully through organic fertilizer that had never seen the inside of a bag or garden center.

I was a local boy, invited to be on the judging team not so much for my garden expertise, but mainly because they needed a translator. The lead judge was Bob Ryan, a city slicker with orchid experience, experience that went largely unused in cow country.

Though Bob had far more judging experience than I, there were things he didn't know, things that every ridge runner has known since youth. Like, he didn't know that gladiolus are a vegetable. In every country garden, growing next to the corn and beans and squash, is a row of glads, a long row. Country folks are frugal, and glads form bulblets, which certainly can't be thrown out. Space is not the problem it can be where land is priced by the foot, so the bulbils make another row with the parsnips. As a result, people in the country give away glads like zucchini, and in August the humblest wooden church has buckets of blooms that would shame a city cathedral, where flowers are bought rather than brought.

Squeezing in one more row is easy when a vegetable garden is the size of a city building lot. Excess is not in the rural gardeners' vocabulary. Here any gardener worthy of the name grows food to eat fresh, food to give away to benighted neighbors and friends who do not have a garden of their own (predominantly people who have moved up here from Philadelphia) and food to "put up" and eat throughout the year.

Contest

A dough vat, salvaged from a local commercial bakery, is sunk in the ground and filled with lilies, all traces of its humble beginnings shrouded by plantings.

Putting up is practiced on an industrial scale. Many a country homestead has a "summer kitchen," a rustic but complete kitchen set up in a building separated from the house. In the heat of August these spacious lodges fill with bushels of corn and beans and tomatoes and every female the family can muster: daughters and granddaughters and friends and daughters of friends. New technologies have changed minor details, but the scene would be familiar to earlier generations.

Those who tended the land and put up its bounty in decades past left not only their traditions but also their tools. While a city gardener may go to a modern garden center to pick up the latest fad in garden gadgetry, his counterpart 200 miles to the north more likely goes into a nineteenth century barn to select a tool his grandfather

bought. Or made. Large wheel cultivators are common, and spading forks have wooden "D" handles because they were cheap when the tool was made, not because they were trendy.

A perfect (and I do mean perfect) example of this genre is the *Country Garden Contest Grand Prize* winner, Eleanor Campbell (not related to the author), who gardens on a Pennsylvania Century Farm. That is a farm that has been worked by the same family for over 100 years. Bottomland, flat as a tabletop, dotted with barns and outbuildings, it's like a hundred other farm sites — except for the gardens. An expansive lawn shaded by native trees is lush with perennials and annuals in beds and borders cultivated to consummation. Then comes the vegetable garden, vigorous despite the drought; the squash patch alone is larger than most suburban gardens and lush as a catalog photo.

Tucked in here and there, around corners and between sheds, are special jewels. A dough vat, salvaged from a local commercial bakery, is sunk in the ground and filled with lilies, all traces of its humble beginnings shrouded by plantings. The



Top: Eleanor Campbell's lily pond was made from commercial dough vat. **Bottom:** Campbell in her cutting garden, only one of several gardens on Pennsylvania Century Farm.



photos by Duane Campbell

A Country Garden Contest

photos by Duane Campbell



Top: Doc Street uses his grandfather's chopper to prepare plants for the compost pile. **Bottom:** Art Clark's 12,000 sq. ft. vegetable garden feeds five families, with lots left over for friends.

upturned stump of an elderly elm sits in a lightly wooded area, the complex nooks and crannies of the roots filled with soil and planted with mosses and other tiny plants of the forest floor. Nearby a bog garden that would be the envy of any ecological display nestles in the corner of a ramshackle, turn-of-the-century dance hall. Dance hall?

Dance hall. A century ago a Campbell ancestor leased over part of this land to Keystone Park, an amusement park that flourished at the end of the trolley line until 1912. The rides were removed, but the dance hall remained, sheltered by trees that reclaimed the land. Now this site of Victorian revelry is a contemplative spot, riddled with paths — woods of our imagination, groomed but not devised.

Fifty miles south, Doc Street tends his village garden as carefully as he minds the medical needs of his bucolic community. Fenced to keep out deer and bears, vegetables overflow the neatly arranged raised beds. This is clearly a garden of the '90s, right down to the textbook three bay

compost pile. But this pile is fed with plants shredded by his grandfather's hand chopper, an iron device as effective as any gas belching machine.

Further back into the hills is Art Clark's 12,000-square-foot extravaganza. This is a more typical northern Pennsylvania garden, surrounded by hills, nothing fancy, just enough food for five families for a year or two. Like many locals, Bud, a retired corrections officer from New Jersey, grows for the joy of growing. The resulting produce is almost an inconvenience, something to put out or give away by the bushel at the end of the season.

Stewardesses are supposed to live six to a condo and party through their down time. Judi Segebarth lived in a tent while she built her mountain-top house with her own small hands. Then she and her husband, Keith Jones, who runs a computer consulting business by modem out of the hay-filled barn, set about creating a garden that required the invention of a special category. Spread out over the hillside were more varieties of vegetables, flowers and herbs



than most people will grow in a lifetime.

Another tent-dwelling house builder is Bud Emerson. He and his wife Pam have a hidden garden of such elegance and subtlety that it escapes words. A stream that no one would believe is artificial trickles through a shaded landscape into a pond filled with spectacular koi and surrounded by dozens of varieties of hosta. The serenity was just what we needed after scrambling up and down a country lane, driving by the entrance to this magic garden a dozen times.

This hill country can be quiet on a Saturday night. We don't have a symphony, local theater groups are a little less than professional. The Sunday paper is 24 pages and the cheese steaks stink. But there isn't an uptown gardener in the whole Delaware Valley who wouldn't sell what the city has left him of his soul for one of these country gardens.

Duane Campbell gardens in Towanda, Pennsylvania, and writes *Green Space*, a weekly newspaper column syndicated in the Northeast.



photos by Duane Campbell



Upper right: Bud and Pam Emerson and friends. **Above:** A few gardeners tried to bribe us with food, and a good job they did of it. The judges, however, voted with integrity, albeit with satisfied palates. **Lower right:** Judi Segebarth in her cutting garden, which is spread out over a hillside.



Bee My Honey

 by Libby J. Goldstein

**Livestock in the city?
Bees are the easiest.
They live . . . fairly
comfortably . . . at
Southwark/Queen
Village Community
Garden.**

Livestock in a community garden right in the middle of town? I'd read about geese in suburban gardens. Should we get some guard geese to protect Southwark/Queen Village Garden from marauders and help with the weeding. Should we clip their wings to keep them on the garden or not? Where would they live in the winter? Would we have to eat them after gardening with them all summer? No geese.

Then, Food and Energy Systems began putting fish farms in community gardens. They are using blue above-ground wading pools, not lovely ponds, surrounded by shrubbery. We'd have to weigh the fish and their food every week and do all sorts of water quality tests. And what about Maxine, the garden cat? No fish, either.

We keep bees. They pollinate our crops and plants in our neighbors' yards. We harvest about 140 pounds of honey a year, two pounds for each of us, and our honey has won prizes at the Harvest Show. Hardly anyone has ever been stung.

On guard

Last fall, between demolishing our old storage shed and building the new one, we needed a safe place to keep important things like our fire hose. Where better than in the hive enclosure near our guard bees. Bees don't weed like geese. They don't produce edible protein like fish. They are probably the easiest urban livestock for home and community gardeners, and when no one is actually gardening, they take care of themselves . . . even in the cold of winter.

Although we did worry about them

during the Great Freeze of '94. David Goltra, our official beekeeper, consulted local mentors like Bill Craighead in Newtown. I posted my questions to the beekeepers' mailing list on the Internet, the worldwide computer network linking thousands of computers and millions of users. Everyone said, "Watch and wait." A colony of wild bees lived in the tower of Congress Hall (less than a mile from here) for 200 years. Maybe ours would do as well.

Normally, a healthy hive will take care of itself all winter long if you leave it enough honey (or sugar water if you've been greedy and removed too much honey in the fall). Living bees keep the temperature inside the hive at a comfy 58°F. If you expect a really awesome freeze, you can insulate your hives, but if the hive does succumb, you can always replace it fairly inexpensively by purchasing a swarm of bees in spring.

It was all David's idea

We'd never have gone into beekeeping if it hadn't been for David Goltra. On a hot Saturday morning in 1984, we were sipping seltzer and watching wild bees in the thyme. David wondered if we could have our own bees. He'd heard that eating honey from neighborhood plants might be good for people's allergies. I didn't know about the allergy part, but honey sounded like a sweet idea.

David called Rick Draper, our Penn State garden advisor to find out about beekeeping. After a frequently loud discussion at the next garden meeting, we decided that if David was willing to be the beekeeper, we'd do it. And because we're a demonstration garden, the Urban Gardening Program agreed to pay David's tuition for Dr. Robert Berthold Jr.'s Saturday beekeeping classes at Delaware Valley College in Doylestown. Early the next spring, David and I drove out to Dr. Robert Brooks' Perkiomen Valley Apiary to buy hives, frames and protective clothing. Next we mucked through the mire at Delaware Valley College to get the bees and queens we'd bought. After a few hours spent putting together the frames and hives, we were on our way . . . for a little over \$100.

But they'll sting

Everyone worries about stinging bees, especially city folk who often confuse honey bees (*Apis mellifera*) with yellow jackets (*Vespula sp.*). Yellow jackets are mean-spirited wasps and will sting if you mess with them at all, especially if they've built their nest in the ground and you step on it. They can sting more than once. Honeybees can't, because they leave their stinger in the victim. Honeybees, on the other hand, are kindly and tame if they don't feel threatened. Our bees and I work by raspberry bushes and herbs very happily together. I've even cut oregano while bees were working the flowers. I've only been stung once . . . at Martin Jackson's studio while he was taking these photos, a most unnatural situation for bees and people.

David has been stung . . . more than once. For a while he was allergic to bee venom, but he seems to have gotten over it. On occasion someone sitting in the fly way between our hives and the garden has been stung when a bee flew onto her, and both the bee and the person got scared and acted foolish.

Actually, if a bee flies onto our clothing or into your hair, it's best to do nothing. Just hold still until it goes away; although when a bee got in my hair, Bill Craighead said to smack it before it got scared and stung me. Instead of doing as I was told, I encouraged it to leave . . . very gently. No sting.

We keep an epinephrine pen . . . a one dose hypodermic . . . in the garden at all times in case someone who does get stung should feel dizzy or short of breath, symp-

Top left: When you smoke the hives, the bees' racial memory shouts, "forest fire," and they start eating lots of honey getting ready to evacuate. Bees that have gorged on honey are tame, passive and easy to handle. **Top right:** David Goltra takes a frame full of honey (and bees) out of the super (hive body) while Jonah Roll keeps the smoker going. **Bottom left:** Goltra uses the hot knife to "cap" the honey cells. If you're neat about it, you can get whole sheets of wax to roll into candles. **Bottom right:** You can just let your honey drip out of the capped frames, but a centrifuge (right) is a lot faster. Ours empties 3 frames in about a minute. (Left) a hive body or super with frames full of honey.



toms of a potentially dangerous allergic reaction. Whether there's an Epipen available or not, if you feel strange after being stung, lie down with your feet up. If a pen is available, use it and stay down until you feel better. If not, have someone call 911 immediately.

While the queen is in the hive being fed and laying eggs, her workers travel 55,000 miles within a 12-mile radius and visit 2,000,000 flowers to make one pound of honey.

She said our bees were swarming???

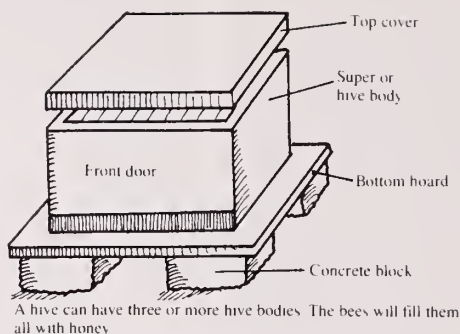
Living in one of the most litigious cities in the world, every Philadelphia beekeeper wants to make sure that if the bees do decide to swarm, they stay home and don't upset the neighbors. At least swarming bees don't usually sting. They're too full of honey. They've gorged on it to fuel their flight and to start their new home off well.

When I found an irate neighbor at my front door all set to sue the garden, Penn State, the United States Government and any other deep pocket she could find, I was sure we were in serious trouble. Bees had swarmed on her house and had gotten inside through a hole in the wall. After we both calmed down, David checked our hives... very carefully. He assured her that our bees hadn't swarmed. We offered to pay the exterminator's bill and give her some honey, but she said, "No." No deep pockets. No civil suit.

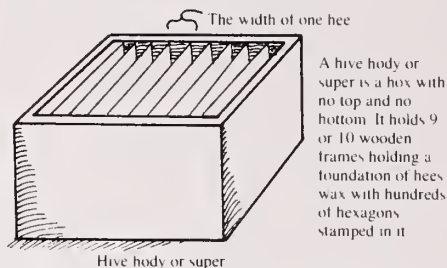
We have actually watched our bees swarm. Several of us were resting in the shade near the hives after a garden clean-up day. Bees started flying right past us in incredible numbers. They were joining a great lump of bees on the mulberry tree, swarming before our very eyes! David came over with a cardboard box and a new hive body. He added the super to the hive, literally wiped the bee lump into the box and dumped the bees by the front door of the hive. They moved back in quite happily.

In spring, if conditions have been good and a hive is very full of bees and pollen, worker bees will rear several queen cells by feeding their cells royal jelly. Royal jelly is richer food, with higher quantities of nutrients and hormones that the worker bees make to feed young larva. If one of these larva is to become a queen, she is fed exclusively royal jelly unlike potential workers and drones.

Just before the new queens hatch, the bees choose sides. The team with the old



A hive can have three or more hive bodies. The bees will fill them all with honey.



queen will swarm and look for a new home. The virgin queen stays home unless the hive is really crowded. If it is, several new queens may swarm with smaller hives. If there aren't new home sites and lots of pollen and nectar nearby, these smaller swarms usually don't make it.

The first new queen to hatch may try to kill the others while they're still in their cells. If several queens do hatch, they may fight it out. Sometimes the workers actually intervene to make sure at least one new queen survives.

Careful beekeepers try to prevent overcrowding and increase their honey-making population by adding hive bodies... boxes with fresh frames... or starting a new hive with a hive body from the original hive and a fresh one for the hive to grow into without leaving home.

Lives of bees

Queen bees usually live for five years. Workers live an average of 42 days. Drones live only to mate with the queen and always die before winter. If a queen begins to decline, worker bees will try to raise a new one by feeding some of the larvae on royal jelly. If they succeed, the new queen goes on a honeymoon flight with the drones, comes home ready to lay 1,500 eggs a day, and the hive lives on. If they fail, the whole hive will die.

While the queen is in the hive being fed and laying eggs, her workers travel 55,000 miles within a 12-mile radius and visit 2,000,000 flowers to make one pound of honey. They meet all sorts of potential enemies, like frightened people and playful cats. In winter, when the workers can just stay home and eat, life is much easier. If they aren't stressed by overpopulation, workers live all through the winter, more than double their summer life span. Maybe there's a lesson in there somewhere.

Don't bee such a pest

Some of our bees moved out of their hive and set up housekeeping in the concrete blocks underneath. Wax moths had taken over the hive. They'd eaten the wax caps on the larvae cells (killing the brood) and laid their eggs and pupae all over the frames and the super. Apparently, this hive wasn't strong enough to kill off the wax moths. It moved to new digs where it lived through the whole winter. When he found them, David moved the bees and their comb into a new hive with clean fresh frames and a supply of sugar water for them to eat until they could start foraging.

When you have to do intrusive work on a hive full of bees, like moving them out of a concrete block and back into a proper hive or taking honey, you calm them down by smoking them. No, you don't put them in a corn cob pipe and light up. You blow lots of smoke at them from a bee smoker filled with paper and sometimes leaves. The bees get ready to leave the hive. (Instinct tells them the hive is about to be destroyed by forest fire.) They gorge on honey, and become much less defensive, much less likely to sting and much easier to work with.

There are always wax moths around when you have hives. A strong hive can kill off any moths that get in. Last spring, David decided to start two new hives. He put a new queen and some drones from our other hives in one new hive. He bought a "nucleus," a queen and her own workers and drones, for the second. The "nuke" was strong and had no wax moth problem at all, but the other hive was overcome. David says the next time he wants to start a new hive, he'll buy a nuke. It only cost \$35 last year and seems much more effective than trying to do it on the cheap by buying a new queen unless you have lots of bees to support her.

We've never noticed any mite problems, but there are two kinds of mites that attack and kill whole hives of bees. Bob Harvey of Harvey's Honey in Monroeville, N.J., says Varoa mites have gotten a foothold there. They've been reported in Pennsylvania, too. These mites can be controlled with pesticides like Apistan strips. If you do decide to use pesticide strips, you have to remove them from the hives before honey flow begins.

Tracheal mites, the other bee killers, can be controlled with menthol strips in the hive. We rarely use chemical pesticides in our garden. You never know what the kids will get into. We only have a few hives. If our bees don't pollinate our fruit trees, there are plenty of wild ones around to do it. We'd rather replace any hives that

succumb to pests than get into heavy pesticide use.

Creating new honey flavors with herbs

Honey comes in all sorts of colors and flavors depending on where the bees have been working. Our spring honey is usually pale gold. It's mild. Sometimes it has a delicate herbal flavor. One of the earliest nectar sources in the garden has been our rosemary. We've also seen bees working the other early herbs, fruit trees, maples and crocus and tulips in the garden and in the neighborhood.

Our summer honey is usually darker. It has a different, and I think, more exciting flavor . . . especially when the bees have been working extra hard on the 'Heritage' raspberries in the garden and in yards on Kauffman Street. Every year and every season has its own flavors and colors. To me that's one of the best parts of keeping bees.

Adding flavors to honey is great fun. Put a quarter to half a cup of dried herbs in a little muslin sack and drop the sack into a sauce pan with a pound of honey. Bring the honey barely to a boil and simmer it until you're satisfied with the flavor. (Watch it very carefully so it doesn't boil over.) I love lavender honey even though the Harvest Show judges didn't even give it an honorable mention. It's wonderful on an English muffin or brioche, and it's absolutely ambrosial in lavender ice cream.

Pepper honey, sweet and hot with the flavor of home-grown dried chiles, is a terrific glaze for roast pork and turkey. A little added to salad dressing just perks up everything, even store-bought iceberg lettuce. It's not bad in marinades and barbecue sauce either.

Our hives produce more than just honey. Each cell full of honey is capped with beeswax. To get at the honey David has to remove the wax covers with a hot knife. Beeswax can be used in candles, soap, cosmetic creams, and it's great on furniture.

Some beekeepers harvest and market royal jelly. Hypothetically, since the queen bee, who is fed solely on royal jelly as a larva, lives years longer than her hive mates, a person who eats it or puts it on his or her skin should live longer or look younger. Actually, the queen probably lives longer because her life is less stressed than the rest of the hive. Save your money for a day at the spa.

Queen mother

I'm really too old to be a princess, but whenever David suggests starting a hive in my back yard, I refuse. I do enjoy the bees

the green scene / may 1994

Getting to Know Bees

Penn State's newsletter for beekeepers *Bee Aware* is available either electronically on PenPages or by mail. Just call your Penn State Cooperative Extension office for more information.

Beekeepers' Associations

In Pennsylvania

Berks County Bee Association
c/o Kent Riegel, President
RD#1 Box 133K
Mohrsville, PA 19541
610-926-4361

Serving Berks, Lebanon, Schuylkill
and Montgomery counties

Chester County Beekeepers
c/o Betsy Hawkes, President
715 N. Creek Rd.
West Chester, PA 19380
610-436-8450

Serving Chester and Delaware
counties

Lehigh Valley Bee Assoc.
237 Rhoades Road
New Providence, PA 17560
610-756-6716
Serving Lehigh, Northampton, Carbon,
Bucks, Berks and Schuylkill
counties

Monroe County Bee Assoc.
c/o Lee Buck, Sec/Treas
Seidersville Road
RD#7 Box 7030
Bethlehem, PA 18015
610-867-5783
Serving Monroe, Northampton, Pike,
Carbon and Lehigh counties

Montgomery County Bee Assoc.
c/o Joe Duffy, Recording Sec.
309 Clivden Avenue
Glenside, PA 19038
215-885-1681
Serving Montgomery, Philadelphia,
Bucks, Chester and Lehigh
counties, and the state of New
Jersey

In New Jersey

New Jersey Beekeepers Assoc.
32 Hewitt Road
Stockton, NJ 08559
908-996-6331

South Jersey Branch
912 Rt. 40
Monroeville, NJ 08343
609-358-1010

Books

ABC & XYZ of Bee Culture, A.I.
Root, A.I. Root Co., Medina, OH

First Lessons in Beekeeping, C.P.
Dadant, Dadant & Sons, Hamilton,
IL, 7th printing 1985

The Beekeepers Handbook, Diana
Sammataro and Alphonse Avitable,
Macmillan, ISBN #0-02-081410-0

Bee Stuff in Cyberspace

If you are interested in electronic
communication, you can get a copy
of "Electronic Delivery of
Apicultural Information," by Tom
Fasulo, Jane Medley and Malcolm
T. Stanford, *BeeScience* Vol. 3,
No. 1, pp. 10-15, July, 1993, by
writing to:

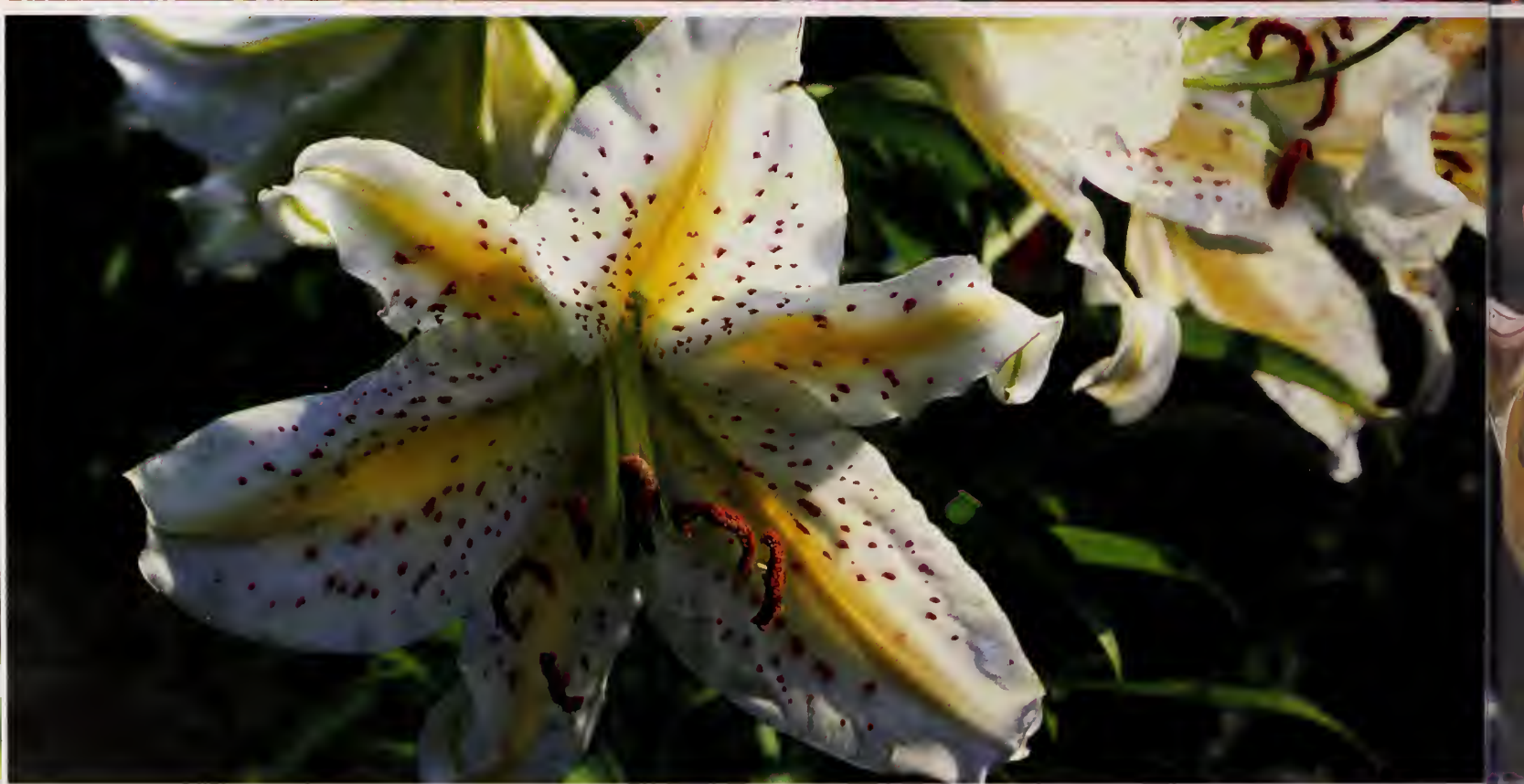
Malcolm T. Stanford
Bldg 970, Box 110620
University of Florida
Gainesville, FL 32611-0620
Phone (904) 392-1801, Ext. 143
FAX: 904-392-0190
BITNET: MTS@IFASGNV
INTERNET:
MTS@GNV.IFAS.UFL.EDU

If you just have a question or two
for the beefolk in cyberspace, post
your inquiry to:
bee-l@albnym1.bitnet.

and the honey and the prolific crops, but I especially relish having some other beekeeper take care of the hives. Our bees must have made the rounds of the neighborhood apple trees at just the right time last year. My infamous "non-bearing Spitzenberg" apple had three apples. If bees actually lived in my yard, I might have

a proper annual apple harvest. Maybe I will become a queen mother one of these days.

Libby J. Goldstein has written many articles for *Green Scene*, but this is the first with help from fellow travellers on the Information Highway — Andy Nachbaur, Jackie McMillan and Adam Finklestein.



Top: Oriental lily hybrid 'Stargazer' with black swallowtail closeup. **Bottom:** Golden-rayed lily, *Lilium auratum* 'Platyphyllum.'



Propagating Lilies

 by Sharon Shreet

It isn't necessary to spend megabucks to have a garden teeming with lilies. Starting with one or two bulbs of each of your favorites, you can produce huge clumps from your own stock.

Here are some easy techniques that I have used to propagate lilies by seeds, division, stem bulblets, scales, and bulbils. Propagation by seeds may bring you a pleasant surprise, as the seedlings usually vary from the parents. Lilies propagated by other means are clones of the parent plant. Which method is best depends on the type of lily you want to increase. But you need no special equipment or expertise for any of these methods — just the characteristic all gardeners seem to possess: patience.

Seeds

While propagation by seeds requires the most patience of all, it offers a special bonus. It guarantees virus-free progeny, even if the parent plants are virus-infected. (Of course, these newcomers are not immune to a later virus attack.)

Depending on species, lily seeds may germinate by developing roots first, with the seed leaf remaining below the soil (hypogeal germination), or in the more familiar manner, sprouting a seed leaf above the soil (epigeal germination). And with either type, germination may be immediate or delayed (up to two years in some species). The following technique has worked with all the lily seeds I've tried.

First, dust lily seeds with a fungicide such as Captan to prevent damping off. Then, sow seeds 1/2 inch deep and one inch apart into moist, sterile seed-starting mix. Keep the seed trays slightly moist and at a temperature of about 65°F. (If the seeds have not germinated within 10 weeks, they are most likely the delayed germination kind. Give them another two months at 65°F, then put them in the refrigerator for eight weeks to break dormancy. Afterwards, return them to 65°F.) When the seedlings appear, give them 14 hours of light per day and water sparingly. Pot the seedlings when the second true leaf shows, and put them in the garden when the bulb

has reached 1/2 inch in diameter. Most plants will reach flowering size in three to six years, but *Lilium longiflorum* (the Easter lily) can flower in less than 12 months.

Lily seeds are best sown in September, but also can be started in early spring.

Division

The bulbs of some lilies (for example, the turk's cap lily, *L. superbum*, and the lovely chaparral lily of the western U.S., *L. rubescens*) branch as they grow. Carefully separate these into smaller bulbs in early autumn, replanting immediately at their original depth. Most will bloom the following year.

Stem bulblets

Many Asiatic lilies and some others produce bulblets, tiny bulbs that develop underground at the base of the stem. Carefully remove these from the withered stem of the parent in autumn. Plant the bulblets, just below the surface, in well-aerated potting soil. Give the new plants plenty of light and keep the soil slightly moist. Plant the young lilies in the garden when leaves have appeared and the weather is predictably warm. The plants will flower in two to five years.

You can force bulblet-forming lilies to produce more of these structures, but you'll miss out on the current season's bloom and weaken the bulb somewhat for the following season. If you don't mind making the sacrifice, try this: In early summer, snip off any flowers or buds and twist the stem to remove it from the bulb. Spray the stem with a fungicide. Bury it in a sloping trench so that the bulb-end is about eight inches below ground and most of the stem's length is covered, with the upper tip remaining above the soil. In late September, dig up the stem and remove the bulblets that will have formed along it.

Scales

Lily bulbs are made up of overlapping scales that can be used as a source of new plants. Pry scales off a favorite bulb by bending them outward — just a few if you

continued

Above: Lily hybrid 'Yellow trumpet.'

the green scene / may 1994



Oriental lily hybrid 'Casa Blanca.'

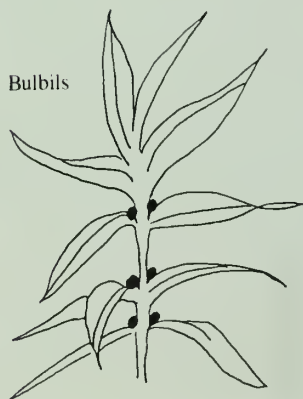
Stem Bulblets



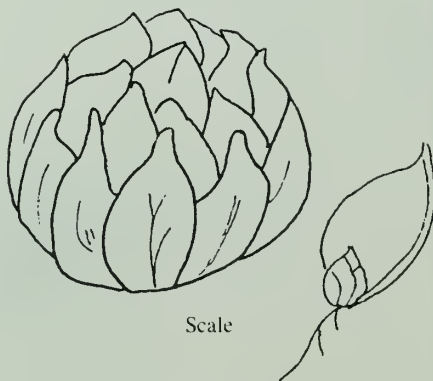
Bulb Ready for Division



Bulbils



Scale



want to assure that the parent bulb blooms the following season or all of a bulb's scales if you are willing to exchange the bulb for a multitude of flowers in future summers. Wash the scales and dry them thoroughly, then dip them in a fungicide. Put the scales in a plastic bag with moist vermiculite. Seal the bag and keep it at a temperature of 70°F until bulblets form on the scales, about one to three months. Plant the bulblets as you would stem bulblets; it is not necessary to remove them from the scales.

Bulbils

Bulbils, tiny green or bluish black pea-size bulbs that grow in the leaf axils of some lilies, offer an easy means of propagation. *L. lancifolium* (the tiger lily) is the most popular species that produces bulbils naturally. *L. candidum* (the Madonna lily) also will produce bulbils if you remove the flower buds just before they open. Pick the bulbils when they become loose in August or early September. Plant them in a moist, sterile soil mix, one inch deep and one inch apart. Keep them cool through the winter. (An unheated basement, garage, or cold frame is ideal.) Put them in a partially shaded outdoor location in spring and through the summer, planting them in the garden in the fall. You'll have blooming-size plants in another one to three years.

I often think the person who first said "The more I have, the more I want," was a lily gardener. If you want more, indulge. Propagating lilies is an investment of time, but one that is sure to pay off in a bounty of bloom for your garden.

Source

My favorite source of lily seeds is the annual seed exchange of the North American Lily Society. Members also enjoy quarterly bulletins, lily exhibitions, round-robin correspondence groups, regional meetings, rental slide programs, and more. Dues are \$12.50 per year or \$31.25 for three years (20% discount for members over age 65). If you are interested in joining, contact:

Executive Secretary-Treasurer
North American Lily Society
P.O. Box 272
Owatonna, MN 55060

Sharon Shreet is a gardener and garden writer in Arnold, Maryland. She fills gardens, pots, and vases with lilies, many of them propagated by the methods described here.



The Accidental Plant — *Gaura lindheimeri*

 by Lucy Fuchs

I usually manage to maintain a balance between well-thought-out purchases and plantings and attacks of devil-may-care gardening. So a respectable number of plants have survived in my garden, the right plant in the right place.

One happy accident, though, has turned out to be a great favorite of mine in the garden. The seeds of *Gaura lindheimeri* were sent to me as one of my selections from the American Horticultural Society's January seed give-away program.

Looking through the catalog now, I cannot imagine consciously selecting it, as it's specified for Zone 7, and I am in Zone 6. Probably the seeds came in the one unlabelled packet, and it wasn't my careless selection after all. So at set-out time in May, some of the seedlings were labelled "?". To hedge my bets I placed these unknowns in two locations, and only after flowering could I identify them from the exceptionally clear pictures in *The Random House Book of Perennials*. Which happily goes to show not all garden mistakes are fatal.

Gaura survived in both places and has been a joy since, flowering through the summer and into fall. In addition, my subsequent reading reveals that it's hardy in Zone 6 after all. It seems to be one of those plants native to Texas and Louisiana that only slowly made its way north, which explains the uncertainty about its survival in colder areas.

In addition to the ease of germination, fail-safe transplantation, ability to sustain drought and heat, *Gaura* has a delicate beauty to recommend it. The tiny star-shaped flowers, on long slender stems, are white with a hint of pink. From a distance the sprays seem to float one foot above the two-foot-high foliage. All in all, *Gaura lindheimeri* is like that rare child: beautiful as well as good.

Like anyone captivated by special loveliness of any kind, I was interested to see if others discerned *Gaura*'s beauty. Let me share my findings with you.

Hortus Third says *Gaura lindheimeri* can be propagated by division as well as seed, and that it looks equally well in the perennial bed as in the wild flower garden. Why

*A packet of
unlabelled seeds
not only survive,
they triumph in the
garden.*

didn't I think of that? Next spring in they go at the sunny edge of the wild flower bed, next to the *Tiarella*.

Not all references are enthusiastic. *The American Horticultural Society Encyclopedia of Garden Plants* describes it as a bushy perennial (a rather homely description for such a graceful plant). It also says that it is short-lived without adding that *Gaura* self-seeds freely. Allan Armitage in his book on perennials notes how well regarded *Gaura* is at the Auckland Botanical Garden in New Zealand, but goes on to hope that the plant will be improved in time by hybridizers with stronger colors and larger flowers. Mr. Armitage will be happy to hear that this year Mileager's is carrying a *Gaura*, 'Whirling Butterflies,' described as more floriferous, and compact with red stems. On the other hand Christopher Woods in his recently published *Encyclopedia of Perennials* notes that the name appropriately comes from the Greek for "superb." As to performance, Woods says *Gaura* when fully established, in two or three years, is at its "ornamental best." He observes that its pinkish-white color softens the brighter colors around it in the perennial bed. I couldn't agree more.

Graham Stuart Thomas, in *Perennial Garden Plants*, *The Modern Florilegium*, cautions the gardener to leave *Gaura* where first planted, but admires its grace and long flowering period. As I write in October, the slender vase before me shows off their delicacy. They look splendid as well, in mixed bouquets with roses and Japanese anemones, which also bloom for a long period. The flowers do fade at different

times but it's easy to remove the spent ones and to restore the fresh look of the spray.

If you wish to grow this plant and do not quite have full sun, try it anyway. One of its locations in my garden has only four hours of sun, and it did well.

At the end of the summer at the Hardy Plant Society's plant sale, I found a large, lovely *Gaura* on a table of select plants to be auctioned before the sale proper, another indication that it will survive a Zone 6 winter. Best of all, seeing it in a place of honor confirmed my taste, as the Hardy Plant Society members are fine gardeners one and all, not prone to ordering impulsively or losing labels.

Sources

Carroll Gardens
444 East Main Street
P.O. Box 310
Westminster, MD 21157
(800) 638-6334
Catalog \$2.00

Linn Farm Perennials
Route 3, Box 281
Charlottesville, VA 22901

Mileager's Gardens
4838 Douglas Ave.
Racine, WI 53402-2498
(414) 639-2371

Niche Gardens
1111 Dawson Road
Chapel Hill, NC 27278
(919) 967-0078
Catalog \$3.00

Andre Viette Farm and Nursery
Route 608
Fisherville, VA 22939
Catalog \$3.00

White Flower Farm
Litchfield, CT 06759-0050
(203) 496-9600

Lucy Fuchs gardens, writes, and reads in her Ambler home.

Let There Be Light

On the patio, in the garden — in all your outdoor rooms

by John Morgan Thomas

Today, no one would build a family room, kitchen or bath without including lighting. Since so much human activity occurs after the sun goes down, the utility of a room without an artificial source of light would obviously be limited.

It seems a bit surprising then that many of our garden spaces and outdoor living areas are developed with little thought of lighting. Considering the effort and expense involved in creating these outdoor rooms, lighting them makes sense indeed. Lighting allows us to use, view and work in our gardens at night. For those of us with busy schedules, that's no small benefit. Even when winter's cold confines us indoors, outdoor lighting can provide a welcome relief by expanding our world to the landscape beyond the windows.

When developing an outdoor lighting plan, consider these three fundamental objectives: safety, aesthetics and security.

I'll focus on the first two here.

First and foremost, we want outdoor lighting to be functional, so that we can safely move around in and use our outdoor living areas. A clearly lit pathway allows us to move through an unseen obstacle course concealed by darkness. Task lighting on tables or at the barbeque lets us see what we are doing. Adequate lighting at steps or on uneven terrain clearly identifies potential hazards.

Perhaps just as important, lighting will increase your pleasure in your garden. Lighting can be used to allow you to see your garden as if it were lit by natural daylight. Or you can "redesign" your garden by selectively lighting only certain parts or features. Think of outdoor lighting as if you were painting on a black canvas, using light to reveal only those elements that support the overall composition or provide the greatest interest. Undesirable features (the neighbor's boat, or your com-

post pile) can simply be made to disappear into the blackness.

Outdoor lighting on many homes is usually limited to floodlights located on and shining away from the building. This effectively illuminates the property for security purposes, but the harsh lighting creates the ambience of a prison break. Consequently, it's best to separate the security lighting system from other outdoor lighting through separate switching.

Design basics

Develop lighting zones and establish viewpoints

Establish lighting zones based upon how you use and how you view your outdoor rooms. Typical rooms might include a front walkway, entry courtyard, swimming pool area, or patio. Lighting for each of the zones can be developed independently, based on individual needs and priorities. Most of the lighting plans I have worked on

The Front Entry

Functionally, this lighting zone is a movement space or a hallway. Light is used to locate and guide the user to the proper entrances, and to safely light the route. Aesthetically, lighting should create an inviting entry, and create scene attractive to the passerby.

Downlights

Located high in deciduous trees, downlights can produce safe levels of lighting for entry areas with a natural moonlighting effect. Aim the fixtures as close to vertical as possible to avoid glare. Trees with open lower branching help conceal fixture locations and cast soft, natural shadows.

Postlamp

These traditional fixtures are best used as an architectural focal point. Keep the wattage of the exposed lamps low to avoid glare. Supplement the light from the postlamp with downlights or pathlights if more light is required.



Outdoor lighting on many homes is usually limited to floodlights located on and shining away from the building. This effectively illuminates the property for security purposes, but the harsh lighting often results in the ambience of a prison break.

are phased in as various sections of the garden are developed.

When defining a lighting zone, determine the point from which you will most likely be viewing the area. Will it be, for example, a sitting area from inside the house, or multiple viewpoints as you move along a garden path. Viewpoints are important as you begin to design and compose a scene with light, and are critical when placing and focusing fixtures.

Consider also where you will enter and exit your outdoor rooms, to determine the best location for switches. I often find outdoor lighting switches positioned in inconvenient locations meaning the lighting is not often used. It's worth the effort and the additional expense to locate the switching right where you want it.

If you are building a new home, pre-planning for future lighting zones will allow your contractor to pre-wire switches, which will save money in the long run.

Concentrate on the effect of the light and not the light fixtures

The best outdoor lighting design disguises or conceals light fixtures during both day and night. I've seen many outdoor lighting installations with wonderful lighting effects at night whose large or otherwise unduly prominent fixtures become eyesores in daylight. Choose fixtures with black, dark brown or dark green finishes, which are the easiest to camouflage.

Small gardens are particularly vulnerable to these eyesores and many low-voltage fixtures will solve the problem. Fixtures based upon the MR-16 lamp are often only three or four inches high. The small size, coupled with a wide variety of beam spread and intensity (very bright narrow spots to wide floods) make the MR-16 based fixtures one of my favorites for

small scale lighting projects.

While the appearance of the fixtures is not critical, the quality is. Outdoor lighting fixtures must be rugged enough to endure all manner of weather and physical abuse. Quality fixtures are well worth the additional expense.

Control glare

Bulbs or lamps, exposed directly to a person's eye, cause glare. If sufficiently intense, it's not only aesthetically unpleasant to the viewer, but also tends to impair the view of the surroundings as the eye adjusts to the brightness of the light.

Control glare by choosing the right fixture design as well as correctly placing and aiming the fixtures. Almost all fixtures should have shields or baffles that can be adjusted to block stray light from the viewer. Pathlights that project light down rather than out, control glare and eliminate the "airport runway" effect produced by a

continued on page 29

Pathlights

Located along walkways, low pathlights may be used to safely illuminate walkways, where downlighting is not feasible. Shielded fixtures, which do not have an exposed lamp, limit glare and avoid the "runway light" effect. Make sure to space the fixtures according to the manufacturer's specifications, to ensure even illumination. A low hedge or perennial border helps to camouflage the fixtures during the day.

Porch Lights

These fixtures should be relatively bright to create an inviting entrance and smooth the transition to the more brightly lit interior. Fixtures recessed under porches or overhangs create a bright pool of light on the ground. Or use shielded wall sconces, which cast light up and down but not outward into the viewer's eyes. As with post lamps use traditional fixtures with low wattage lamps as an architectural accent.

Wall Washers

Wall washers illuminate the building facade. Locate them close to the base of the wall to accentuate the texture of stone, brick or vines. A single bright fixture may be located well away from the building to more evenly illuminate the entire facade.

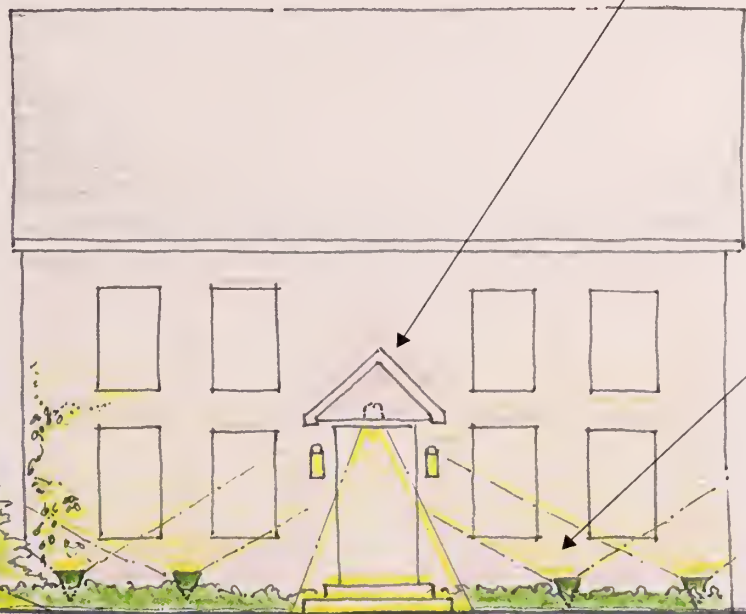


illustration by John Morgan Thomas

The Patio

Good lighting can make these workhorses of outdoor spaces even more useful. A basic level of lighting should be adequate for passive activities and for safe movement. More intense lighting can be introduced to accommodate specific tasks such as reading or using a barbeque.

Arbors or pergolas are excellent locations to conceal small downlights that illuminate work areas such as a barbeque. Floodlights, aimed away from the terrace, and hidden by the arbor, can softly illuminate the surrounding landscape.

Uplights on surrounding trees and shrubs reflect a soft wash of light back onto the terrace. Use the brightest lighting to illuminate details such as interesting bark or branching, which may be appreciated best by nearby viewers.



Window Scene

This lighting zone is created with a single viewpoint in mind — a window. Lighting must be sufficiently intense to combat the glare on the window caused by interior lighting. Landscape features, primarily vertical surfaces, are illuminated with light of varying intensity, to create variety and increase the sense of depth and perspective. The techniques applied here are readily adaptable to developing other lighting scenes viewed from inside or out.

Background

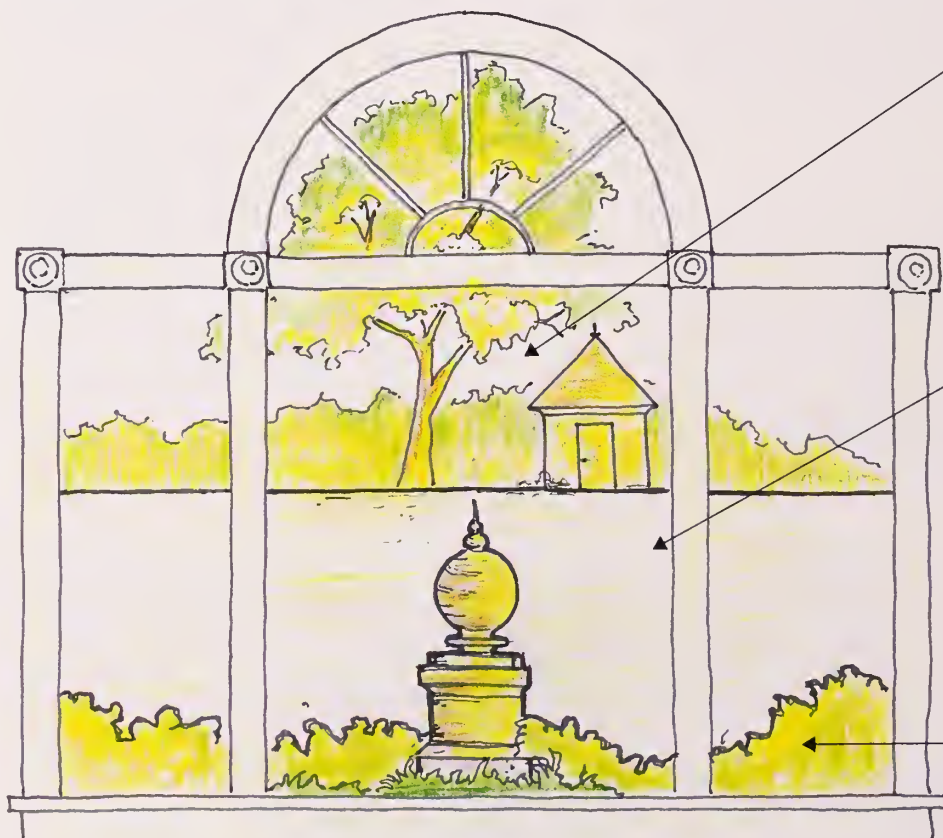
Moderate to high levels of light establish the boundaries of the scene, create a sense of depth and illuminate focal elements. Bright uplights are focused on a specimen tree and garden house in the background of this scene.

Middleground

Lowest levels of lighting serve to fill in areas between more brightly lit areas and unify the overall composition. Light sources may include soft "moonlighting," from nearby trees or a gentle wash of grazing light from near ground level.

Foreground

Use highest levels of light closest to the house. Narrow beam spotlight mounted above on building, highlights garden sculpture in this example.



To brightly light a table for nighttime use consider a spotlight with a narrow beam spread located high on an adjacent structure or overhanging tree. Placement and shielding are critical to avoid glare.

Small recessed low level lights may be located in walls or benches to gently illuminate the surface of the deck. Follow manufacturer's specifications for spacing to ensure even illumination.

Lights located under porches identify entrances and provide a glare-free source of lighting for the terrace.

Good lighting at steps or other changes of grade is a must. Position to minimize potentially confusing shadows.

series of exposed lamp fixtures.

Placing and directing the fixture is critical. Aim fixtures away from the principal viewing positions. Tree-mounted fixtures should be aimed down or at low angles.

Don't rely on traditional fixtures such as postlamps or carriage lamps to light large areas. A high wattage, exposed lamp located at eye level, can be a major source of glare. It's better to use these fixtures as accents with small wattage bulbs, and rely on other fixtures to provide functional levels of light.

Vary the intensity of the light

Illuminating all areas to the same degree of brightness is equivalent to planting a perennial border with plants of similar size, texture, and color. Varying the intensity of light can create variety, depth and highlight features important to the composition of the scene.

That rule does not extend to lighting areas such as paths or patios, however. They should be lit as evenly as possible. A common mistake with path lighting is to place fixtures too far apart, creating alternating pools of light and dark. Visibility is impaired because the eye has difficulty in adjusting to these rapid changes in contrast.

Don't overdo it

Some of the best outdoor lighting installations exhibit soft, subtle lighting effects. The human eye has a remarkable ability to adapt and function at low light levels. Except in high use areas don't try to produce levels of light equal to those you

are accustomed to indoors. Remember that maintenance requirements and energy use increase with the number of fixtures.

Lighting techniques — examples

The illustrations here depict a variety of lighting techniques that may be used to solve some of the most commonly encountered outdoor lighting problems.

The front entry, patio, and window scene are the lighting zones that I have found to be the highest priority for most homeowners. Remember that each illustration represents a composite of possible lighting techniques or types. The best solution may be quite simple, using only one or two types of lighting for each area.

Getting started

A variety of professionals can help design and install an outdoor lighting system. Design professionals familiar with outdoor lighting, such as landscape architects and lighting designers, can provide services ranging from consultations to complete lighting plans and specifications. Electricians have primary responsibility for installation. Make sure, however, to select an electrician with specific experience with landscape lighting installations; they will be more sensitive to horticultural needs such as protecting tree roots as well as to aesthetic concerns such as concealing fixtures and wiring. An arborist may be required if the installation includes mounting fixtures high in trees. Some companies

specialize only in landscape lighting installation, and many landscape contractors are installing low voltage systems that do not require the services of an electrician.

You can get a good feel for outdoor lighting effects by experimenting with temporary lighting. You will need several grounded outdoor extension cords, stake-mounted floodlight lampholders (the type that hold colored floodlights for the holiday season), and a variety of reflector lamps with different beam patterns and wattages. A flashlight for navigation, heavy gloves to prevent burns, and a pair of sunglasses are useful props. Experiment with the placement of the fixtures and selection of lamps until you achieve the desired effect. Many electrical distributors now have sample demonstration kits containing a variety of low voltage fixtures and a built-in transformer.

Working with electricity demands care, so always take the appropriate safety precautions. Make sure the circuit you plug into is equipped with a ground fault interrupter (GFI), and never work in the rain or heavy dew.

John Thomas is a graduate of the Landscape Architecture program at Penn State University, and has practiced as a Landscape Architect for the past 13 years. In 1993 he founded John Morgan Thomas Landscape Architects. His office, home and gardens are located in the village of Sergeantsville, in rural Hunterdon County, New Jersey.

MYRTLE,

A fragrant plant for indoors and outdoors



by Lorraine G. Kiefer

Myrtle (*Myrtus communis*) is a fragrant, easy-to-grow house and patio plant favored by many since ancient times. Native to the Mediterranean, this plant has several characteristics that make it a great addition to the window garden. Myrtle, now found in many countries including the United States and Eastern Europe, is so steeped in myths and legends that even Wyman's *Gardening Encyclopedia**, and The Lesley Bremness *Complete Book of Herbs** refer to these ancient tales.

Because of all the stories connecting myrtle to love, the ancient Greeks dedicated it to Venus. It was planted around temples in honor of Venus in both Greece and Rome. Soon myrtle became associated with weddings, where it was often worn by the bride in her hair, on her dress and carried in her bouquet. Today many still keep this custom, including people in places as far away from the Mediterranean as Poland and other Eastern European countries.

Myrtle is an attractive plant. If trimmed occasionally it will become tightly branched. It has small, glossy, strongly scented, dark green leaves. The white bloom, only about 1/4 inch in diameter with bright gold stamens, is also sweetly, if not as strongly, scented. These flowers often appear from midsummer to late fall. The plants can be made into topiaries or shaped like small Christmas trees when they become full.

Myrtle likes full sun, but needs some protection when summered outdoors so the pot won't get too dry on hot days. A porch or patio with morning sun is perfect. In open areas the plant will do best if kept in a large pot with a saucer to provide constant moisture during very hot weather.

According to Wyman's, this plant is

**The Complete Book of Herbs: A Practical Guide to Growing & Using Herbs*, Lesley Bremness, Viking Studio Books, NY, 1988.

**Wyman's Gardening Encyclopedia*, Donald Wyman, MacMillan, NY, 1986 (2nd Ed.)

photos by Ted Kiefer



Large leaf myrtle (*Myrtus boetica*).

valued because it can grow well in hot, dry situations in seashore gardens. So it's no surprise that myrtle does well in most homes. Remember though that any plant is more vulnerable when grown in a pot than if grown directly in the garden, so don't let myrtle dry out. To compensate, plants such as myrtle can be grown in clay pots and sunk in the ground during hot spells or when the homeowner is away or too busy to water frequently. If you soak the surrounding soil and apply a clean thick mulch, the plants will be fine for up to several weeks. This treatment is often the best way to keep the roots cool and moist, yet allow the foliage to take advantage of the sun.

In my house myrtle grows best in any of the southwestern windows. The bay window is good because it cools down at night and offers good humidity. The kitchen window sill is also good because the plants there get frequent showers, lots of fresh air and great sun. After Mother's Day my plants all go out to one of the two porches. Neither of these has much sun, but they still thrive! The only time I lost a myrtle plant was when I allowed it to dry out for too long a time. All the leaves fell off and the plant never recovered.

Propagation

Myrtle is fairly easy to propagate during the summer. The new growth is hardened off by then and usually roots well. I have cut pieces from plants belonging to family members, taken them home wrapped in a wet paper towel. I stick them in a pot of Pro-Mix in my greenhouse where they usually always root quickly if it's warm. A rooting hormone, such as Rootone, increases the percentage of cuttings that root and also hastens the process. If the season when I root is cold, a heating pad in my greenhouse supplies bottom heat. Once rooted, keep the plant moist until a good root system is formed.

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Top: Author's myrtle plants summer outdoors at the nursery. **Left to right:** *Myrtus boetica*; *Myrtus communis* 'Microphylla', variegated; *Myrtus communis* (common myrtle).

Bottom: The author creates myrtle wreaths using a floral wire covered with floral tape as the base.



Rosebuds, lavender, rosemary and myrtle used to create a bridal wreath. The wreath, which dried beautifully, hangs in the bride's home two year's later.

bride with sprigs of myrtle on the hemline and in the wreath on her head.

Many herbs were used in the traditional Polish wedding. The ancient custom of crowning the bride with a wreath or garland of myrtle, rosemary and sometimes rue, along with roses and other blooms, goes back thousands of years in Europe.

In the old days, the young women made wreaths of herbs and flowers on the Eve of the death of St. John the Baptist, June 23, also called mid-summer's eve. This was a magical time of bonfires and wedding predictions. Young women often threw their wreaths in the river or in the fire at the end of the festivities. If a wreath was rescued from the river by one of the boys, oftentimes the couple would become engaged.

When our son Ted married Sharon Leonard, I made her a wreath of rosemary, lots of myrtle and many tiny fresh rosebuds. We also put myrtle and lavender in her bouquet. She wore the wreath until the end of the wedding at which time her mother removed it, according to their family custom, and placed a bubuska on her daughter.

Sharon has dried the wedding wreath and it hangs in her bedroom. Both rosemary and myrtle plants were given out as favors at the wedding. I hope many are still thriving and that they might some day yield sprigs of fragrance for another bride's wreath and bouquet.

Lorraine G. Kiefer

Myrtle Used in Polish Weddings

My fascination with myrtle increased the summer my husband and I taught English in Poland. We were surprised to see myrtle and scented geraniums growing on almost everyone's window sills. There were myrtle plants in the dorms where we lived, plants in the homes where we visited and plants at the remote little farms where my cousins lived in the north-

eastern part of Poland. Don't confuse the common myrtle, *Myrtus communis*, with the trailing groundcover myrtle.

I managed to get two very tiny cuttings of the myrtle from the farmhouse window sill at the Grochowski farm in Barglow, Poland, where my grandfather was born. It was then that I realized that all of the photos they sent us of weddings showed a

Sources

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Lorraine and Ted Kiefer have been owners of Triple Oaks Nursery in Franklinville, New Jersey, since 1980; Lorraine started the business in their home in 1976. A former 4H leader, Lorraine writes articles for magazines as well as weekly columns for local newspapers. She conducts herb classes and flower designing classes at Gloucester County College and at Triple Oaks Nursery.

Letters to the Editor

Bird Feeders

My wife and I love to watch the birds eat breakfast while we eat ours from our kitchen window.

So during the recent snow and ice event, I fed the birds more religiously than ever before.

To do that I turned over one big green trash can with concentric circular rings on the bottom, banged off the snow and poured sunflower seed and wild bird food on in a pile. It was such a big hit I turned over a second can. What a crowd of all different varieties of birds!

Warren D. Lewis
Spring City, Pa.

Books that Change the Way We Garden

In your *Green Scene* issue, Nov/Dec 1993, Richard Bitner's article, "Books that Change the Way We Garden," was most enjoyable. I have always found time to read May Sarton, she is a good read. Other books I have enjoyed are as follows: *A Patchwork Garden* by Sydney Eddison, Harper & Row, 1990; *Trees & Shrubs for Pacific Northwest Gardens* by John & Carol Grant, Timber Press, 1990; and *The Essence of Paradise* by Tovah Martin, Little Brown & Co., 1991.

A real find for me was coming across a first edition of *The Practical Book of Outdoor Flowers* by Richardson Wright, J.P.

Lippincott Co., 1924. Best of all has been books by Angelo Pellegrini, *The Food Lovers Garden*, Lyons & Burford, 1970, and his last book *Vintage Pellegrini*, Sasquatch Books. I am now looking forward to finding books listed in Bitner's article.

Viola Pontecorvo
Kirkland, Wash.

Gardening at Graterford

I once had an occasion to visit Graterford Prison, and I can't imagine a more desperate place of human habitation. The introduction of gardens must rank as the single most humanizing development to take place there in the prison's history. The article conveys the contrast between the grim background of the prison grounds and the profusion of color in the gardens. But most important, it catches the enthusiasm of the gardeners, including some of the cooperating guards. Wouldn't it be interesting to hear more about the relationship between the behavior of prisoners who joined the programs and changes in their subsequent behavior both in and outside of the prison.

H. Boyce Budd
Devon, Pa.

I want to take this opportunity to thank you for making Graterford Gardens your feature article in the January-February

issue of *Green Scene*. After reading the article, I felt, as a resident of Graterford for 14 years, it was an accurate story that told of one of the most valuable programs here at Graterford Prison.

As representative of the Family Resource Center for this project (which happened to make the cover), it was so rewarding for us because it further enabled us to speak to the children that visit here about applying labor, a lot of patience and some tender loving care to grow the fruits, flowers beautiful and fragrant, or vegetables with all their brilliant characteristics. It was nice to be able to use our gardens for such a learning that the children could easily relate to.

One other thing I want to share with you. Although you did mention Viet Nam Veterans Post 466, I want to say VVA 466 tended their garden as a veteran would guard our country — outstandingly! I mean this was a large group (emphasis on large) of individuals who are truly dedicated to their garden project. Each person was committed to helping anyone who happened along. Their group numbers spoke loud and clear. For a group of individuals whom society has all but forgotten, their pride shows through their garden project, just how worthwhile and therapeutic gardens are, especially at Graterford.

Bruce Bainbridge
Graterford, Pa.

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Country gardeners Judi Segebarth and her husband Keith Jones created their mountainside garden to yield many varieties of vegetables, flowers and herbs.
photo by Duane Campbell

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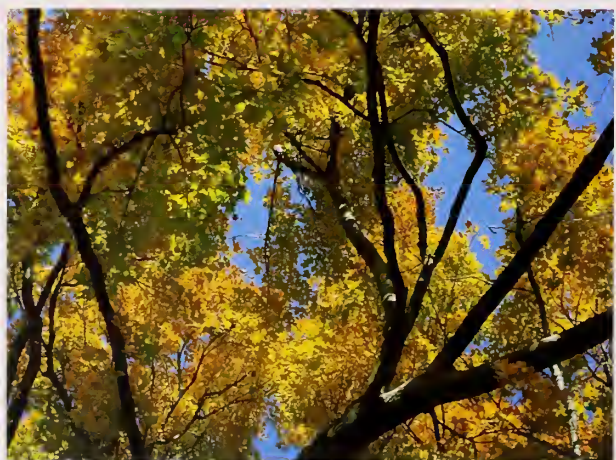
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31.

Front Cover: Artist Penny Harris sets off the gray and red-toned 'Fairy Wings' poppies at the top of the picture, and the elegant 'Helen Elizabeth' poppy in the center, against a background of *Geranium* 'Johnson's Blue'; the burgundy-colored sweet william adds punch and depth. See page 3.

Front cover: photo by Ann L. Reed



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An Artist's Perspective

by Anne S. Cunningham

photo by Ann L. Reed



Artist/gardener Penny Harris paints the rose 'Wind Chimes.'

Penelope Harris works as an artist and speaks like a poet.

"A painting communicates an artist's feelings," she says, "whether I'm expressing my reading of a subject, like a model, or expressing my appetite for a still life. The same is true for a garden. I create a mood, just as in a painting, of my appetite, my feeling, my emotional response to the garden so someone else can have the same pleasure I have when experiencing that creation. In my garden, I want to convey the essence of spring as I see it, spring as the awakening of all the senses. I want romantic colors and sensual fragrances that make you catch your breath with pleasure."

Harris's garden is a spring garden only, flourishing between April and July, reaching its peak in June. By summer she takes her palette and trowel to Maine to work magic in cooler climes. Her Philadelphia garden is almost a secret garden, tucked into a space bordered on three sides by a 1928 weathered gray stone wall, while the fourth side faces a terrace and a sun room

off the end of the house. A small fountain in the wall lends the gentle sound of water and attracts songbirds that bring movement to the garden and flutter the delicate Fairy Wings poppies (*Papaver rhoeas* 'Fairy Wings').



"I want trembling flower heads in fragile spring colors like iridescent violets and tender blush pinks, cream and silver, chartreuse and raspberry. I try to put colors beside each other that vibrate with one another, such as the chartreuse flowers of lady's mantle (*Alchemilla mollis*), sapphire blue lobelia, and black sweet william (*Dianthus barbatus*). I use a lot of sensuous dark flowers because all those fragile, romantic colors could be too sweet. I want strength. It's spring, but it's not weak. My favorite Paul Simon song has a line about '... the strength to push like spring.' As delicate as spring looks, imagine how much strength it takes for bulbs to push through frozen ground."

The dark end of her garden palette resonates with rich black violas and pansies, black sweet william, a chocolate maroon hollyhock (*Alcea rosea* 'Nigra'), dark plum purple fritillaria, and a deep velvety single tulip (*Tulipa* 'Queen of the Night'). She says "Dark colors add weight and density that accent the ethereal quality of the other flowers."

With an artist's touch, Harris sprinkles pansies throughout the garden. Black pansies, blue or silvery white ones with black faces, and an infinite variety of pastel colored pansies with ebony markings peek out from ground level at irregular intervals. By using the soft clumps of pansies, full colorful mounds like *Alchemilla* and *Geranimum* 'Johnson's Blue,' and the fast growing *Nepeta*, she manages to conceal all the soil without making her garden look overplanted.

The relatively small size of Harris's garden gives her more leeway to use dark colors than if she had a large garden. Each of the four beds measures 8 ft. by 20 ft.



Pansies play an important role in the artist's garden, where she has a full range of pastel pansies, as well as black and blue pansies (not shown here).

When viewed up close, black and deep purple or blue flowers create intimacy, adding richness and romance even in the most delicate violas, but from a distance, dark blooms just look like vacant holes.

Harris grows her unusual pansies and violas, hollyhocks, and sweet william from seed under lights in her basement. Her first experiment was with the delicate 'Fairy Wings' poppies. "I love them!" she says. "They're like water color with one color washed on top of another, in so many different shades, like a blue gray undertone with a smudgy raspberry glaze on top. They're strange colors: cool red with gray, sometimes a white picotee rim, speckly lavender and pink with a bright turquoise blue eye, like a drop of jade."

Now the poppies seed themselves, and she's hesitant to tear them out. "When I'm painting, I have to be alert because no matter how carefully I plan my composition, the painting takes on a life of its own, and it's important to flow with it. I try to do the same thing in my garden. Within the structure of

careful planning, I let the poppies, the low feathery love-in-a-mist (*Nigella*), and some tall larkspur (*Delphinium ajacis*) run rampant throughout the garden so the mood is free and natural. A garden shouldn't look too planned, just as a painting shouldn't look contrived."



Planning is what makes her garden so successful, however, and she develops the garden in the same way she creates a painting.

"In a painting I start with the limitations of the canvas, the frame and perimeters. I do the same thing in my garden, with the walls, the beds and the slate edging around the beds. Within those confines I start with composition — the bones of a painting or a garden. I first consider the larger plants, what I want to do with the walls, proportion, scale, angles, direction, how I want to lead the viewer's eye. In a painting, every stroke relates to every other and with one wrong gesture I can enhance or destroy everything

around it. The same is true in my garden."

To assess both her paintings and her garden, Harris uses a trick she learned when she took courses at The Pennsylvania Academy of the Fine Arts. She holds her hands up in front of her face, looking through a porthole made by overlapping her forefingers and her thumbs. Peering through this tiny window, she checks to make sure there are no dead passages, places that convey nothing. She says every part of a painting, or a garden, should keep the eye moving, whether it's a wall, a tree, a flower or the space between flowers. Viewers should want to keep looking around, discovering something new everywhere they look.

"Nothing is nature exists in a vacuum; everything relates to everything else. If you didn't know better, you might try to focus on one part of the garden, then let the rest drop off, creating a weak, incomplete picture. The eye has to move, but you don't want it to be like a tennis match, where the eye jumps back and forth. Everything has to be sympathetic with what's next to it. And whether in a painting or a garden, I never want the viewer to experience all of it in one glance."

Harris mixes flowers in subtly different shades with the same expertise as she blends bits of paint on her palette. Her garden tapestry flows with as many similarities as differences, all held together by dominant underlying tones. Blue plays a major role in her garden, as it does in her house. "Blue and lavender are romantic," she says, sweeping her arm out to encompass a stately *Delphinium* 'Blue Bird,' *Veronica* 'Crater Lake Blue,' the *Centaurea montana* — a pale blue 2½ inch cornflower with contrasting bold purple center, a sky blue scabiosa, tiny *Veronica* 'Crater Lake Blue,' and the ever-present *Geranium* 'Johnson's Blue.'

"Blue cools things down that are too hot," she continues. "Blue softens strong colors like magenta that's powerful but cool because of the blue undertones. I use fragile pink pastel then add punches of dark burgundy and deep raspberry red to add strength, richness, and weight so the colors don't all have the same value. In this garden I use apricot and peach, but never orange. Nor yellow, except for the earliest daffodils that brighten the earth before the perennials are in bloom."

Some of the most romantic colors and fragrances in her garden come from old roses creating a floral lace that carries the eye up and around the walls and other

continued on page 6

the green scene / july 1994



Harris likes a hint of unplanned wildness in her garden. Here foxglove, blue geraniums, white salvia, chartreuse lady's mantle, valerian and poppies run together in a rich melange of reds, blues, purples, creams, and whites.

verticals. She lets the pastel roses 'Constance Spry' and 'Wind Chimes' grow into each other, blending color and scale by weaving the stronger toned small flower in a rhythm that plays off the powdery color of the larger bloom.

Two tall katsura trees (*Cercidiphyllum japonicum*) help set the garden's boundaries and provide support for more climbing roses: an apricot peach 'Alchymist' on one tree, a glowing pink 'Albertine' on the other. By echoing the texture of the katsura tree bark in the knobby leaves of a large *Hosta sieboldiana* at the base of the tree, and in the gritty texture of the wall behind the tree, Harris succeeds in luring the

For Penny Harris, understanding and using color effectively comes from the heart as well as from the mind.

viewer's eye beyond the magnificent flowers.

Other carefully selected trees continue the garden's romantic colors. Dwarf crab-apples (*Malus* 'Snowdrift') fill the middle ground with spring blossoms, while elegant 50-year-old weeping cherry trees (*Prunus subhirtella* 'Pendula') cascade down with luxuriously frothy pink blooms over the nearby flagstone terrace. Gray cast iron Victorian benches tie in with the gray terrace and slate border edging, the gray fountain and the tree bark, keeping rhythm and balance even in the garden's hardest objects.

True to her romantic inclinations, Harris bathes the senses in a delicate springtime perfume from plants beyond the old roses. Fragrant creeping thyme (*Thymus serpyllum*) crunches gently underfoot as visitors walk toward the garden across a flagstone terrace with the low-growing herb planted between the stones. Tall white valerian, also known as garden heliotrope, sends out a rich perfume that smells somewhat like vanilla, and pink dianthus adds a cinnamon scent to the air.

Harris's artistic training makes scale and proportion equally as important as color and variety. She believes in learning the rules, whether in painting or in gardening, then knowing when to break them. For height and contrast, she tries for the tallest and largest flowers that will grow in spring, with foxglove, delphinium, hollyhock and valerian that quickly stretch to four feet high. While avoiding the stadium look of small, tall, taller, tallest all lined up, she

uses the light and airy poppies to carry the viewer's eye up and down, in and out, gracefully threading through the tapestry of the garden.

Like the different forms of flowers, foliage in different sizes and shapes helps continue the rhythm, avoiding monotony. Whether they're huge hosta leaves or ferns, velvety thick muted silver green *Alchemilla* leaves, spiked iris leaves, or the feathery green mist behind *Nigella* blooms, every green leaf serves a purpose as important as every bright flower.



On a smaller but no less exacting scale, Harris uses her artistic garden skills in the world of flower arranging, where with her arranging partner and friend, Audrey Nichols, she's won top awards at the Pennsylvania Horticultural Society's Philadelphia Flower Show and public admiration from here to Great Britain.

Although Penny Harris came from an art-oriented family, she resisted painting while growing up, then was too busy with young children to find time to paint. She took her first art lessons when she was in her thirties, and her skills blossomed during four years of classes at The Pennsylvania Academy of the Fine Arts, culminating in a fifth year traveling scholarship. Today she works regularly in her studio and quietly enjoys the success of sold out one-woman shows in Philadelphia.

Curiously, she never paints landscapes. When her favorite poppies or orchids appear in her paintings, they're usually there as found objects that speak to her in the context of her subject.

For Penny Harris, understanding and using color effectively comes from the heart as well as from the mind. No matter how many times she goes over the process, she ends up by saying "It's instinctive. I have an idea of color and do it by feel, whether in my painting or in my garden. There's a natural progression of colors and what they do to each other. I don't analyze them, I just work with flowers or paints until they look right, until I know."

Freelance writer/photographer Anne Cunningham's work has appeared in the *Philadelphia Inquirer*, *Philadelphia Magazine*, as well as a number of national publications. A frequent contributor to *Green Scene*, Cunningham chaired the Editorial/Design Committee for the Pennsylvania Horticultural Society's Cookbook: *Great Recipes from Great Gardeners*.

Pennsylvania Horticultural Society members, led by Peggy Bowditch (shown here), visit Penny and Henry Harris's summer garden at Smallidge Point in Northeast Harbor, Maine, which sits on the entrance to Somes Sound. The reflected light off sky and water enhance the color found in this living palette. The beautiful blending of both bold and subtle color splashes can only be the choice of a true artist.



photo by Ed Lundenmann





Fresh-Cut Color



by Cheryl Lee Monroe



Our gardens speak volumes with flowers, with color. Our color choices, proportions, light, shapes, the containers and settings allow arrangers the flexibi

I was becoming obsessed with color as having meaning . . . as holding meaning all on its own. . . I slowly came to realize that what I was actually trying to do was . . . to set color free. — Anne Truitt (*Daybook*, Penguin Group, N.Y., 1982)



photo by David Montgomery from *Designing With Flowers* by Tricia Guild, Crown Publishers, N.Y., 1986

Margaret Parke cuts “shimmering colors” when she gathers fresh flowers from her garden. She writes in her book *A Garden for Cutting*: “Inspiration will come from the flowers.” But the many facets of flowers’ colors are what demand exploration, are what will stretch our imaginations, our creativity, and that evoke emotions and feelings. Dancing with the ever-changing light, colors will constantly and subtly transform each flower, whole compositions, making color seem an illusive beast. So, what’s an arranger to do?

I subscribe to writer Louise Beebe Wilder’s garden philosophy when it comes to color in my own flower designs: “Every person may be his own artist without apology or explanation.” There are, however, **some** guidelines when playing with color. Those who have gone before us did learn a few things but the bottom line remains the same: each arrangement “is unique, so trust your instincts” Parke reminds us.

Flower arrangements have long been dictated by availability and the wholesale flower industry’s selections. Carnations, ferns, chrysanthemums and baby’s breath kept color choices at a minimum in the past and Easter was (and still is) spelled with white, pink and yellow, Christmas with red and green. To transcend these limitations, we more and more turn to our gardens for flowers, to the specialty cut-flower growers on the rise in the United States, and pay heed to roadside offerings and the new selections appearing in shops from countries all over the world. Tom Pritchard of Madderlake, one of New York’s famed flower shops, attributes this shift to “our attitudes . . . changing and becoming more generous, more thoughtful, and more expansive, [and] our notions of flowers seem to be following suit.”

The time has come to apply our refreshed attitudes to the color of our fresh flowers too. The time for pleasant combinations is past — the heyday of mauve and blue, one hopes, is gone.

While the mathematics of color can be boring, it’s essential to know there’s a method to the madness. “Nature paints with light,” Penelope Hobhouse elegantly



OOOOHHHHH! The garden's bounty for summer with endless opportunities to explore the limits of color. Selections include red dahlias, green bells-of-Ireland, crimson love-lies-bleeding, pink lavatera, zinnias, marigolds, orange tithonia and sunflowers.

noted about color's key ingredient; the stronger the light, the stronger the colors. Next, consider how one color is altered by its proximity to another by the containers we choose, by backgrounds, shapes and sizes of the flowers, and their proportions. The opportunities are endless, the variables easily get out of hand.

So, where does an arranger start: with flowers or theory? Foremost: experiment, experiment, experiment; use the power of color to your advantage, opt for a little pizzazz and take a cue from Audrey Nichols.

Audrey Nichols, interior decorator turned floral designer and many-time winner at the Philadelphia Flower Show, does not dance gingerly around color. She tests all of color's limits with fresh flowers, never opting for safety — there is no mauve and blue on this woman's palette.

On a grey, rainy November day we sat talking, peering out the window into her garden, reveling in the colors, the supple grandeur of November in the rain-kissed trees, wet bark, the shimmering lavender of the woodland's floor, the black of outlines, the dripping gold of vines. Nichols sees color everywhere, subtle, yet insistent even in winter. Nichols seems to create easily

her own splendor with fresh-cut flowers using color lavishly, recreating nature's masterpieces.

We see color with excitement as our eye matures, as we practice, gaining courage to

Audrey Nichols would "rather lose being provocative than win by being safe."

mix purple with orange, turquoise with red, blue and violet with yellow. Etched in my mind is my persistent college art teacher who insisted we learn to see, really see, beyond boundaries, to light, to shadows, to color. Nichols sees beyond all boundaries, always contemplating color. "I want people to go "Wow," says Nichols, a feat she accomplishes by manipulating color. Nichols prefers experimenting particularly when it comes to the Flower Show where she'd rather lose by being provocative than win by being safe."

Nichols never gave color serious thought until a weaving instructor made her choose colors to work with; made her aware of color and its role in the surroundings. She was intrigued and for the past 16 years the

milieu is flowers influenced by food, fabric, themes, and backgrounds. Color now the warp with which she weaves her flowers.

Nichols's Flower Show ribbons, a great source of pride, are the product of a deeply creative partnership. Nichols and Penny Harris, fellow floral designer and artist, have seen eye to eye for 14 years starting with an entry called "Simply Beautiful." Their entry knocked the judges out, winning "Best of Day" and "Best of Week." Lavender, peach and orange flowers in a sheet metal container against a metal background.

For the Flower Show Nichols prefers the jumping off point to be containers, collecting them a hobby in and of itself. The background is next; the selection of flowers last. On that November day looking out the window once again, Nichols invited me to envision a container yellow brown in color, a background of burgundy brown, that of the woods, with the arrangement dripping red viburnum berries. Then, bringing me a mustard-yellow vase, she speculated on a turquoise background, or how about red, forget the vase, how about a red arrangement against a turquoise background — you'd be knocked out — right. Yes, and Nichols was only peering out the window.



Blue Ribbon winner at 1994 Philadelphia Flower Show: **Tropical Splendor**, an entry in the Open Space classes by Audrey Nichols and Penny Harris. The judges wrote: "Sunny color combination; creative choice of flowers and fruits. Exciting mass arrangement." The arrangement included Dendrobium orchids, anthurium, protea, heliconia, ginger, Cymbidium orchid, banana, bamboo, moss, monkey grass, date palm, and raphis.

Experience has helped Nichols develop some formulas for color. Once she decides on a color, she repeats the color making it stronger, the repetition providing harmony. Next, she throws in a contrasting color to breathe life into the design. Here a color wheel comes in handy; you can check the colors that lie directly across (opposite) from the color you are repeating for contrast. Ever wonder why red and green works so well at Christmas; they lie opposite each other on the color wheel providing contrast for one another.

Nichols does not care for mixing too many colors together, something many of us find irresistible, declaring arrangements with every color of the rainbow "too sweet." Nichols prefers to make an impact, and sticks with two colors in an arrangement. When she introduces color, she repeats it throughout. For example, a rose with a pink edge, dark green calathea leaves with pink stripes and a pink calla lily would repeat pink throughout the arrangement.

Nichols also moves in color "blocks" for the first color, seeking a color to interrupt, to contrast, for the second color. Color blocks consist of analogous colors, those lying next to each other on the color wheel. Closely related colors are pleasing together

Making Sense of the Reds

Red is wonderfully exciting, but deciphering cerise, scarlet, crimson, burgundy, brick red, vermillion, and magenta is mind boggling and the list of names for red colors does not stop there. Red has two sides to its personality: one, vermillion, which lives on the side of orange and yellow; the other, crimson, which leans towards blue. Mix the two and you will instantly know the error of your

ways. Moving around in the right direction on the color wheel, depending on if you chose crimson (blue) or vermillion (orange), will help you calculate the analogous colors that will lend harmony to the red you select.

The magic partners for crimson are deep purple foliages, for vermillion, the mighty peacemakers, grey or dark green. Pink (tints of reds; reds

mixed with white) can easily take up residence and enhance either crimson or vermillion.

For additional reading, see Mary Keen's *Gardening with Color* whose wonderful color directory at the back of the book sorts the red flowers we can grow in our gardens into the categories in the red spectrum.

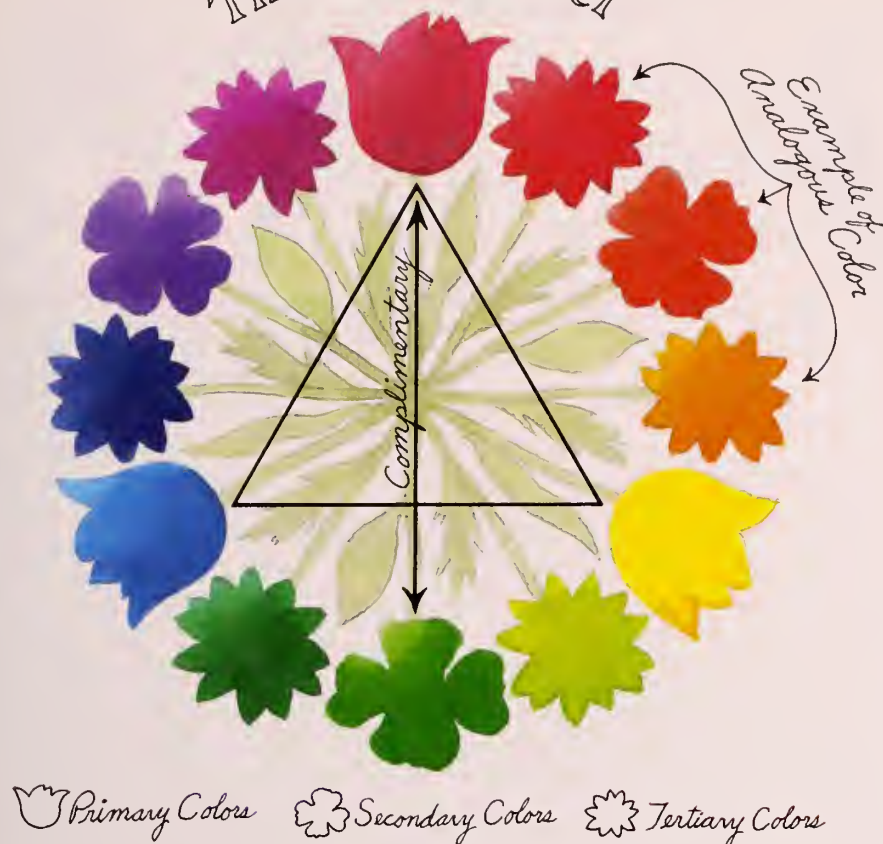
Cheryl L. Monroe



photo by David Montgomery from *Designing With Flowers* by Tricia Guild, Crown Publishers, N.Y., 1986

Red dances to the forefront (see rose in lower right corner); it is never shy. Here shades of pink and mauve azaleas and alstroemeria with lime guelder roses (*Viburnum opulus*) are set off in a richly worked magenta bowl.

The Color Wheel



but not so similar as to be dull. A color block, for example peach, can be taken to orange, orange pink or out to pink, bright pink then purple and to clear yellow; the yellows perhaps roses with edges hinting of orange.

Tricia Guild reminds us "with color one should see with the heart not the mind."

A colors spectrum (color "block") can also include its shades (the addition of black to a color) and tints (the addition of white to a color). For example, if Nichols wanted you to see red when you saw an arrangement, she would use all of the red spectrum to move your eye around the arrangement. An expertly contrived red arrangement might have pink (red with white added), burgundy (red with black added) and perhaps a hint of red orange.

What's the big deal about contrast? Contrast gives you the most zing for your money. Nichols counts heavily on contrast (opposite colors) acutely aware of what one color will do to another and striving for just-the-right proportions. Too much or not enough of a contrasting color will spoil the design, or at best be mediocre. For example, orange and purple are great together, purple with a sliver of orange is exciting, equal portions of each color glaring.

Some color tips

Nichols always keeps these few tips on color in mind:

- dark colors make flowers look heavier, not larger;
- yellow looks the largest, then white and red;
- dark colors used lower in an arrangement provide weight, bright colors will catch the eye and are best placed in the center;
- light colors belong at the top and edges to provide a sense of airiness;
- place the largest and strongest flower first to give an arrangement form.

What more do we need? Just the flowers. Fresh flowers allow us to "see instantly how the colors react together, you can stand back and observe the effect, take out the colors that offend, break up drifts of the same color or inject sharp contrast," says Tricia Guild in one of my favorite flower books, *Designing with Flowers*. So experiment! In your garden or a flower shop try Nichols's method of selecting the colors. When purchasing flowers Nichols lines her selections on the tables (or in her hand), heads facing out, allowing her to put flowers together, altering proportions, shapes, sizes and color — moving them around to create the essence she seeks. Then she goes home to play — to arrange,

the part that is undoubtedly the most fun.

A little trial and error is a must and fresh flowers are a perfect medium to try your wings. Tricia Guild reminds us "with color one should see with the heart not the mind"; in the end it's all subjective, so BE BOLD.

Books for Color in Your Garden

Cutting Gardens

A Garden for Cutting, Margarett Parke, Stewart, Tabori & Chang, New York, 1993.

Cutting Gardens, Anne Halpin & Betty Mackey, Simon & Schuster, New York, 1993.

The Cut-Flower Garden, Theodore James, Jr., Macmillan Publishing Co., New York, 1993.

The Flower Arranger's Garden, Rosemary Verey, Conran Octopus Limited, London, 1989.

Books for Designing

Color in My Garden, Louise Beebe Wilder, Doubleday & Page, Garden City, New York, 1918.

Color in Your Garden, Penelope Hobhouse, Little, Brown, Boston, Mass., 1985.

Designing with Flowers, Tricia Guild, Crown Publishers, Inc., New York, 1986.

Gardening with Color, Mary Keen, Random House, New York, 1991.

Flowers Rediscovered, Madderlake, Stewart, Tabori & Chang, New York, 1985 (the title page says by Madderlake — however, the three authors are Tom Pritchard, Billy Jarecki and Alan Boehmer).

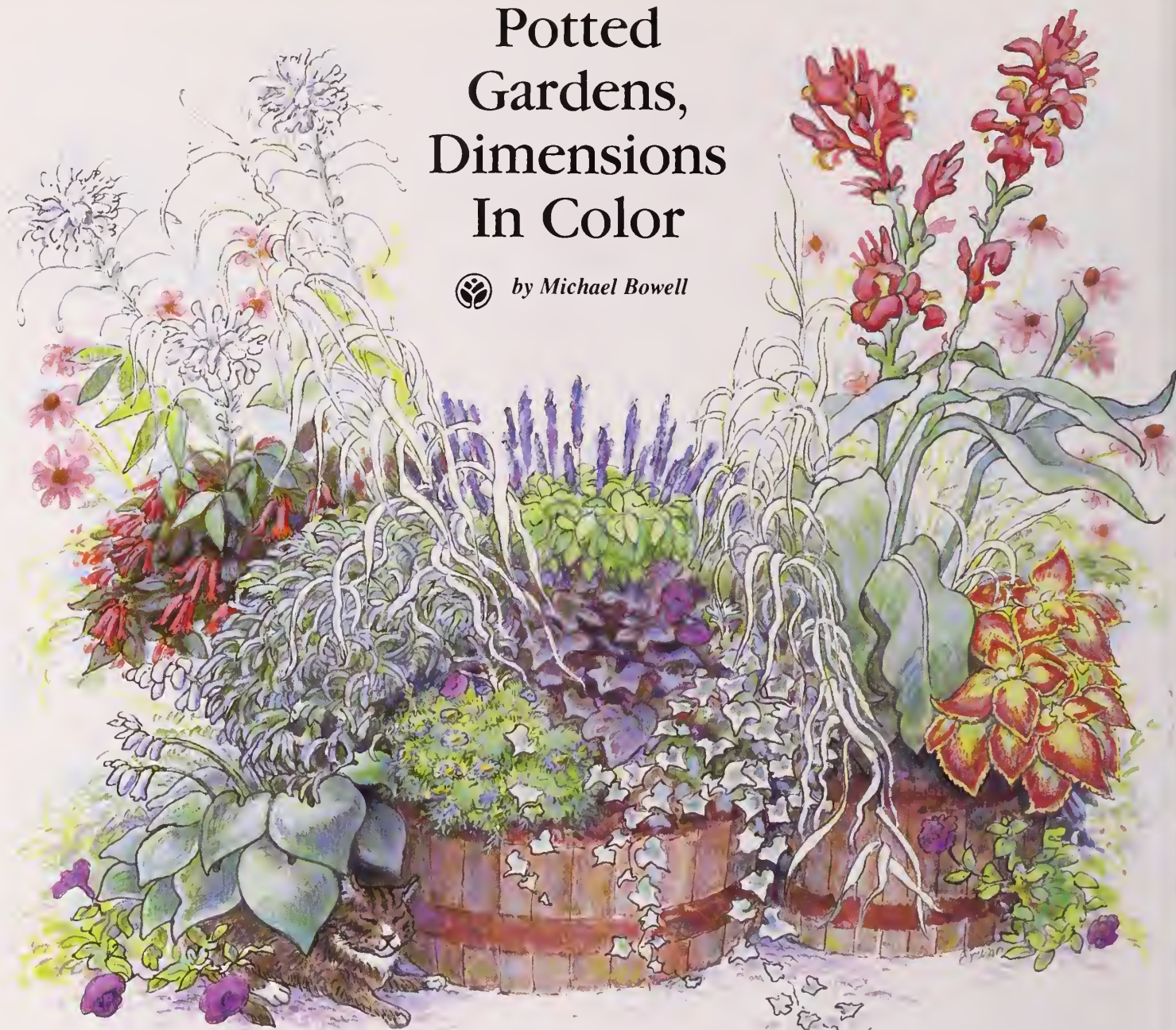
These books are available to members through the Pennsylvania Horticultural Society Library.

Potted Gardens, Dimensions In Color



by Michael Bowell

illustration by Barbara Bruno



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Using several containers in a grouping provides a large palette for combining your horticultural treasures.

Bold"; "Dramatic"; "Exuberant": these were some of the comments people made about my windowbox entry at the 1994 Philadelphia Flower Show. When asked what I did to make my entry stand out, I replied, "It fills the space, the colors are warm and bright and easy to spot from a distance." Though this particular container garden was a display piece "planted" entirely with flowering orchid plants, the same rule of thumb applies to any container garden of this style, which we'll call "potted gardens."

Potted gardens are truly "celebrations of horticulture." They are a soup-to-nuts approach to container gardening and great fun for the avid gardener who loves to grow and experiment with a wide array of plants.

Color is the most stimulating design element. It's the reason most people plant flowers. Whether the design of the color scheme is simple or complex, exciting or boring, intoxicating or revolting, the colors are what are most memorable in the garden.

My own potted gardens are actually clusters of pots, some of them at raised levels, with the raised pots planted with small trees or towering vines to heighten the effect. The tallest pots may contain both, the vines clambering up and out through the trees and shrubs and then dripping from their outermost branches,

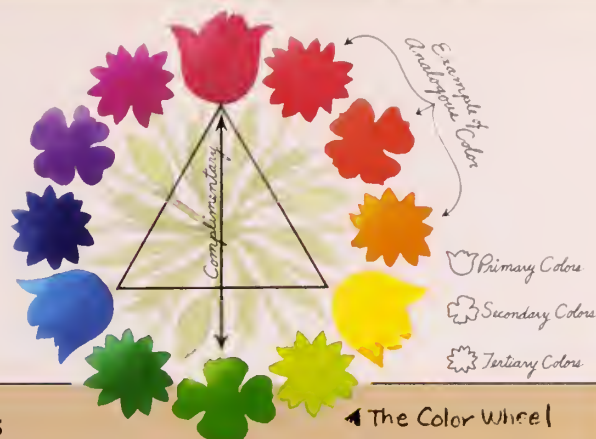
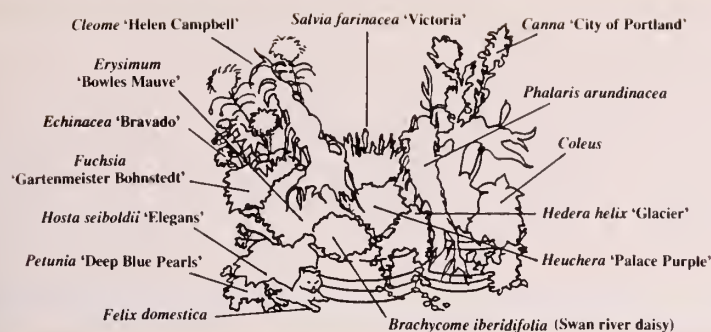
creating niches for the contrasting forms or "focal points" within.

Think of your potted gardens as compositions within a defined space, much like the artistic classes at the Flower Show. They are flower designs, and may be thought of as mass or line-mass arrangements. They are three dimensional and should fill their prescribed niche. The plants fill the niches created by the surrounding plants and by the massing of the containers. The design, a dynamic one, changes throughout the season.

Potted gardens can provide what any in-ground landscape feature can, and more. They can be best used on a deck, patio, driveway, or other hard surface that has no soil in which to plant. Containerized plant-

continued on page 17

the green scene / july 1994



Design Elements and Principles for Potted Gardens

Design Elements

Designing a container garden (or any garden, for that matter), requires arranging plants in a way that is both artistically pleasing and practical to the health of the plants. You essentially arrange the recognized design elements (the **observed characteristics** of the plants), according to standard design principles, while paying attention to the individual horticultural needs of the plants. The following elements are the building blocks of design. Once you can analyze your work, you can change the elements to make your containers more pleasing to you. Remember, since gardening is a process, you will always be analyzing and modifying. The design elements include:

- **color** — the orange-red of tithonia, the sky blue of morning glory, the bright purple of hyacinth bean seed pods, or the burgundy foliage of *Heuchera* 'Palace Purple'
- **texture** — the rough, brush-like flowers of ageratum or the satin finish of petunia
- **pattern** — a silhouette such as that formed by the floral arrangement of cleome
- **form** — a 3D contour or outline as bold and upright as canna foliage or as fine and sweeping as asparagus fern
- **size** — of flower, foliage or total plant
- **space** — the area between individual branches, leaves, flowers, or containers
- **line** — a continuous visual path created by one shape, form or color running through a contrasting one
- **light** — daylight, the only light source for most garden viewing, is everchanging and has the most effect on the way we perceive color in the garden.

Design Principles

The standard design principles are the more abstract values. They are basic art standards used to organize the design elements. Design principles include:

- **scale** — size relationship
- **proportion** — the relationship of one part to another or to the whole
- **balance** — visual stability
- **rhythm** — dominant visual path
- **dominance** — a stronger effect, implying subordination
- **contrast** — the use of opposite qualities

Contrast provides dominance and rhythm. Without contrast, your design can become a salad, having no focal point and no rhythmic line to carry your eye through the design. Since most of my containers are viewed from a distance, greater contrast is required between design elements for the arrangement to be effective. This is true at the Flower Show, where many designs are viewed at a distance of several feet, and contrasts need to be great to be effective in that large and busy space. Contrast applies to all of the design elements listed above. Contrast in color and form are my first priorities in making the design carry for a distance. Contrasting texture makes the design more interesting at a closer view.

Form is three dimensional. Form differs from simple shape or outline, which are two dimensional. A cattleya orchid flower and a zinnia may have the same round shape, but the cattleya has much more depth in its form, due to the positioning of its petals, sepals and lip. The foliage of hosta and some of the tropical gingers have the same shape, but their plant forms are different. The hosta leaves radiate around a single point, whereas ginger leaves are attached to a line and carried in one plane. Many tropical plants such as cannas and bromeliads have broad foliage and bold open forms with lots of space between large leaves. These forms provide focal points when contrasted with the denser-growing and fine-leaved filler plants such as nierembergia and verberna.

Color is the most stimulating design element. It's the reason most people plant flowers. Whether the design of the color scheme is simple or complex, exciting or boring, intoxicating or revolting, the colors are what are most memorable in the garden. The color schemes may be related or contrasting.

Related color schemes include:

- **monochromatic** — one hue and tints, tones, and/or shades
 - hue — a pure color
 - tint — add white, to lighten hue
 - tone — add gray, to make hue less intense
 - shade — add black, to darken hue
- **analogous colors** are near each other on a color wheel or chart

Contrasting color schemes may offer a contrast of hue, value or chroma. Value refers to the lightness or darkness of color; chroma refers to intensity or grayness. Complementary colors are contrasting hues, opposites on the color wheel, such as red and green, yellow and violet, or blue and orange. Whereas a related color scheme, especially monochromatic, is best when viewed from close range where its subtle depths can be appreciated, complementary schemes provide visual impact from afar. When using related color schemes, contrasting value or chroma will help carry the impact to a greater distance. An analogous color scheme of pinks, blues, purples and mauves may be spiced with bright hot pinks (analogous), or bright clear yellows (complementary).

Sometimes you get contrasts in color you may not have planned. Some pelargoniums, better known as fancy-leaved geraniums and prized for their foliage colors and patterns, can produce flower colors in shocking contrast to the foliage. My first inclination was always to remove the little varmint, but I find that what may appear as contemptible at close range might be exciting or interesting from a distance. I now tend to leave them and might even plan for them. Keep in mind that the color green is a great moderator in the garden. Its close relative, chartreuse, will showcase brilliant hues and also serve to combine them well. Color combinations that you wouldn't dare in your dining room might be spectacular in your garden.



The coleus, cannas and impatiens are of related colors, but contrasting forms. The elephant ears offer contrasting color and form.

photo by Barbara Bruno

ings also function well right in the garden. They provide instant height differential, the containers alone providing both contrast and sculptural appeal. They may be used to provide more interest and add color to key spots in the overall garden design, such as signifying the beginning of a path, a backdrop for another garden feature (e.g. a fountain or sculpture) or framing a vista. They may extend an already existing garden, or provide a barricade to protect that garden from running pets or parking cars. They may provide privacy from a neighbor, traffic, or simply another garden area with a different style or color theme. Potted gardens are outlets for your horticultural passions, perfect mediums for enjoying some of your horticultural treasures!

The gardener's color sense evolves

My experience with gardeners indicates that we evolve a sense of color usage that I analogize as a clock. As beginning gardeners, at a few minutes past twelve, all color is good. We are just happy that the plants survive to bloom. By one o'clock, we develop certain favorites and by two o'clock we've learned to demonize specific colors, such as orange and magenta. At three o'clock we are working with related color schemes and by five, we are busy developing monochromatics.

When the clock strikes six, we find complementary schemes appealing. We realize that even the colors orange and magenta just might have their uses. By seven, both the related and the complementary schemes are becoming more complex. At ten, we may have figured out how to combine orange and magenta ef-



organizing a three-pot garden.

fectively. The closer we get to twelve o'clock the more daring we become, experimenting and using more colors together. To a novice, these color combinations might not look much different than the random design at a few moments past twelve.

Getting started

First, locate some large pots. Large is important because you will be using lots of plants. Also, large pots hold lots of soil and therefore more moisture. This means less frequent watering, so most of the time spent watering will be to grow your plants, not merely to save their lives.

Whiskey barrels work well in my country garden. I drill holes in the bottom for drainage and holes in the upper sides where I fit them with nylon rope handles. I fill the bottom third of the barrels with old plastic

pots, both for drainage and weight reduction, and then with a soilless mix (e.g. Pro Mix). I now have easy-to-handle barrels.

Here's a recipe for organizing your potted garden. If using three pots, I raise the center pot and position the others to form a triangle. The top pot gets the tallest and most upright growing plant. This may be a small tree, large shrub, or large tropical plant such as a crepe myrtle, viburnum, or canna, respectively. Into one of the side pots, I might repeat the same plant or use one of similar color with contrasting form, or one of similar form but contrasting color. Then, I plant the top pot and the third pot with a third type upright specimen of contrasting color or form, using that same plant for continuity. Trailing plants such as english ivies, asparagus ferns, lantanas or verbenas are now added to all of the pots, again using repetition to provide a rhythmic

Contrasting forms provide interest in this related color scheme.



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Canna 'Pretoria' offers contrast in color and form.

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flow. If the pots are in the garden, I repeat these trailers at the base of the pots. I will complete the composition with different forms of similar color such as hosta, *Heuchera*, multiflora petunias or pansies. I might even accent the design with one of my orchid plants or a potted perennial lily, nestling the entire pot into the mass of other plants and leaving it for the duration of its bloom. Whenever you walk through your garden, visit a nursery or thumb through a catalog, be on the lookout for interesting colors and forms to work into your potted gardens.

Though every season brings a host of new plants to work into my potted gardens, I have built up a list of the "tried and true," which have become my staples. *Cedrus atlantica* 'Glaucia Pendula,' the weeping blue atlas cedar, and the various forms of the Japanese maple, *Acer palmatum*, make good hardy specimens with year-round interest. The many cultivars of *Hedera helix*, English ivy, provide me with varied

foliage forms and colors that will tolerate sun or shade. Most are hardy if planted in the ground. Many will come through a mild winter beautifully in pots, especially if protected from the winter sun and wind.

Verbenas, the tender perennial types usually marketed in hanging baskets, come in a wide array of colors and will perform well from spring until frost. You can usually get three to five plants out of one hanging basket. Other plants typically offered in hanging baskets include *Nierembergia* 'Purple Robe,' Swan river daisy (*Brachycome iberidifolia*), *Scaevola* 'Blue Wonder,' cane-like and trailing begonias and many color forms of lantanas.

Coleus, in all its forms, shapes and color patterns, is a proven winner for sun or shade. Warmth-tolerant fuchsias, whose many cultivars I propagate annually, go from early spring to a hard autumn freeze. Multiflora petunias come in almost every color and hold up better to summer thunderstorms than their larger-flowered cou-



sins. *Petunia integrifolia* is a twining mass of magenta rose that requires little care. The many silver and gray foliage forms of artemesias and senecios will work in almost any color combination, and will thread their way through the potted gardens, providing that visual path called rhythm.

Keep in mind, a color scheme need not be polite to be satisfactory to its creator. My basic belief: There's no such thing as a bad plant, nor a bad color, only ineffective usage.

How to Keep Potted Plants Looking Their Best

Potted gardens do require some maintenance to look their best. Water regularly — a thorough deep watering when the soil becomes dry in the top few inches. Feed with a slow-release fertilizer such as Osmocote 14-14-14, three- to four-month formula, twice during the growing season; the plants will also benefit from an occasional liquid fertilizer.

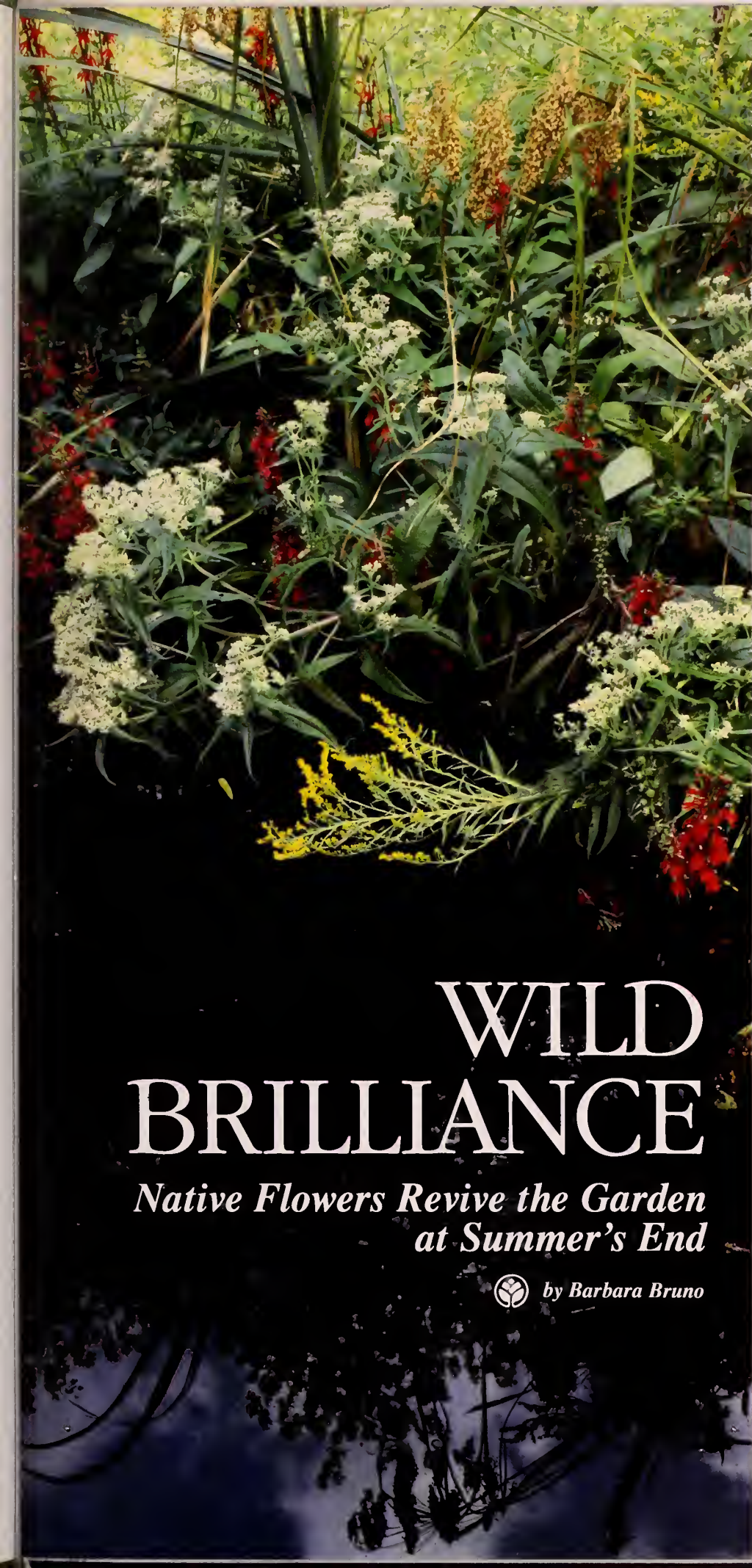
To control insects, shower plants regularly with the garden hose to help keep the mite and aphid populations down. Budworms on petunias, nicotianas, pelargoniums, snapdragons and cleome and leafminers on helichrysum can be controlled with Dipel or other safe-to-use sprays containing *Bacillus thuringiensis*, or bt.

Deer can also be a menace. The deer repellent sprays will help if used on a regular basis, especially if you start your program before they develop a taste for your potted gardens, and they are not starving for other things to eat.

Suggested Reading

Landscaping with Container Plants, Jim Wilson, Houghton Mifflin Co., Boston, N.Y. (Paperback edition), 1994

Michael Bowell, proprietor of Floral Design Associates of West Chester, specializes in indoor and outdoor garden design, focusing on perennials, unusual annuals, tropicals and orchids.



Blazing cardinal flower, boneset and goldenrod arch gracefully over the water at Leaming's Run Garden at Cape May Court House in New Jersey in late summer.

Not long after I first picked up a trowel, a chance remark by a bee-keeping friend colored my gardening expectations for many years.

"The peaks and valleys of honey flow are the pulse of the natural world," she said.

The poetry and perception of her observation engaged me. I discovered a revealing equation of my own: the returning bees' nectar load charts both the world's seasonal ventures and my own garden's eventful flowerings.

Matching up our commonalities — spring's hardwood blossoming, June's abundance — I came to a shared shortfall: August's poverty stretched beyond my own bloom-poor garden, affecting even the wild industry of the bees.

I lived with this explanation until my familiarity with local flora revealed the incompleteness of my assessment. I became aware that while hot weather's vistas lack June's flowery legions, August's choice, but scattered, company are left to the flower lover's discernment.

Lately, many of us are discovering that these brilliant minorities are wonderfully suited to our gardening needs. Their distinctive appearances, colors as potent or soothing as the sundrenched season requires, and vigor equal to summer's worst excesses, make them a useful adjunct — or alternative — to familiar border flowers.

Some gardeners, like Karen Williams, are drawn to indigenous plants for their symbiotic relationships with wildlife, as well as their horticultural possibilities. Williams, a botanist, established Flora For Fauna to satisfy both her professional curiosity and her developing gardening interest. She grows hundreds of wildflowers from seed each year to supply the expanding list of her Woodbine, N.J., nursery and garden. Although it's no coincidence that the bastion of many drought-time flowers is the moist meadow, ditch, stream side, or bog, Williams finds that most local natives tolerate a range of garden conditions. She points to ironweed (*Vernonia noveboracensis*), a wetlander rooted in her sandy loam and clustered with rich red-purple bloom resembling a showy congregation of tiny thistles. Despite drought, its fine display was accomplished with infrequent waterings. A western plains ironweed (*V. missurica*) is an even more drought-tolerant choice that does well on my sandier soil.

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WILD BRILLIANCE

*Native Flowers Revive the Garden
at Summer's End*



by Barbara Bruno

photo by Barbara Bruno

At right: Mistflower in the author's garden enjoys light shade with the soft foliage of tender peppermint geranium (*Pelargonium*).

Far right: *Scutellaria incana* and the sunflower *Helianthus hirsutus* bring unusual color and form to a border at Chanticleer, a pleasure garden open to the public in Wayne, Pa.

Either handsome upright plant can reach 7 ft. but dryness reduces their stature. Williams scales hers to less than 4 ft. to fit a narrow border by pinching out the growth tips at 6 in.

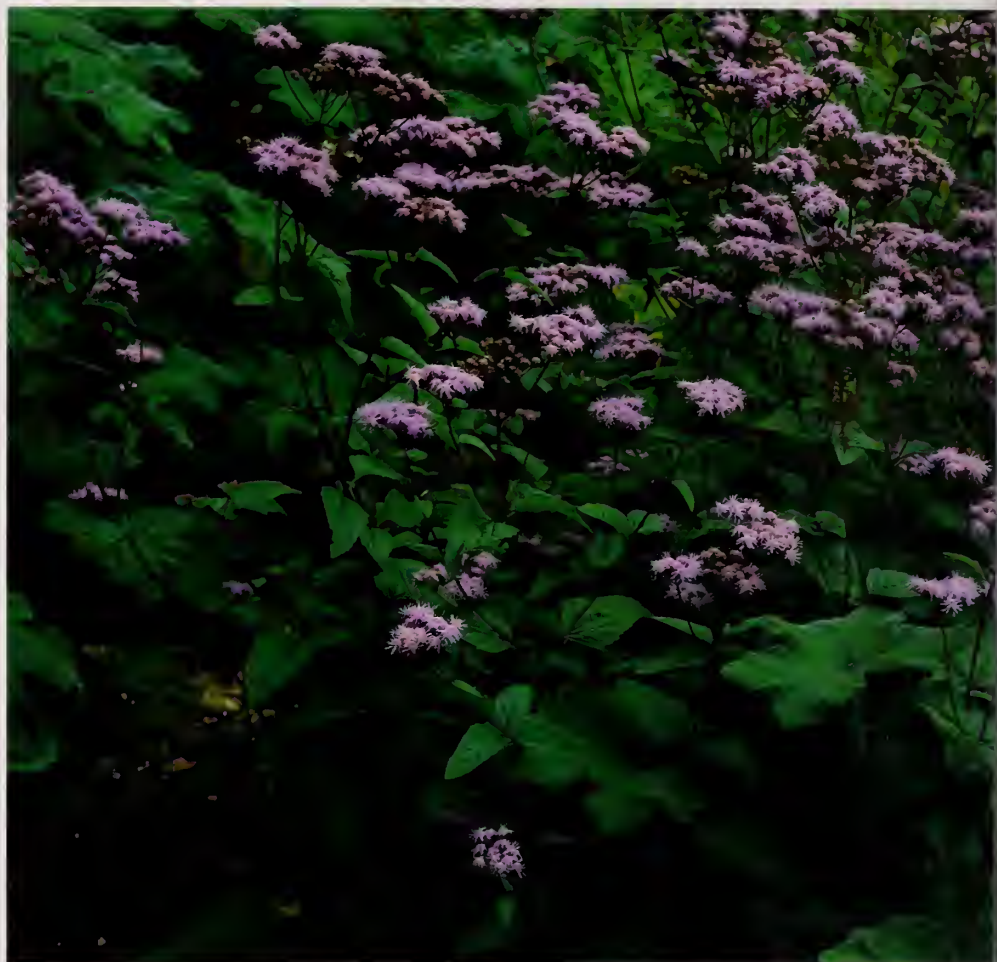
In a traditional border this wildling could enliven "masses of late white phlox and bluish rue" just as it did for writer Louise Beebe Wilder, over 50 years ago. She also enjoyed its "imperial" color companioned by peach phlox and silver lyme grass (*Elymus glaucus*) or with those other showy wildlings, white boltonia and yellow sunflowers.

In Williams's garden, ironweed grows with *Monarda punctata*. This horsemint of impoverished coastal plain fields and back bay dunes can reach showpiece status under a gardener's care. Perennial in spartan habitats, on unaccustomed border luxury it rises to its best self, often dying after overextending into a 2½ ft. thicket of stems bloom-tiered in the rosetted monarda manner. Its blossoming is odd yet lovely, the flowers creamy yellow, curved and lipped and speckled prettily with purple, each tier resting on a showy lilac-pink ring of bracts.

A dry environment has prompted Williams into creative gardening. She keeps that notorious aquaphile *Lobelia cardinalis* happy by planting it around a ground-level birdbath, and she's turned a troublesome roof runoff into a support system for moisture lovers. A buried plastic pipe gathers the rainwater at the lowest spot of the newly graded driveway where it once puddled widely. The flow empties into a 2 ft. x 4 ft. x 1 ft. deep depression bottomed in a plastic sheet. The seeping water encourages damp banks for an extended time. The many *Eupatorium* species Williams grows in the area now need no supplemental water.



Mistflower (*Eupatorium coelestinum*) blooms here in late August with a luxury unachieved in most settings. However, its ageratum purple flowers are showy even in a dry setting. This wild allure has earned its threatened status, rather than any fatal delicacy of temperament. Mistflower bloomed in the dry dooryard when my parents bought their home and still tenaciously flowers there with little care 50 years later. Gardeners have long paired this plant with chrysanthemums, and it makes a fine contrast in form and color. I especially



like it with the old, loose habited hybrids *C. zawadskii* (now *Dendranthema zawadskii*) especially 'Mary Stoker's soft, fadey apricot bloom, or with the small, scattered daisies of *Bidens ferulifolia* 'Golden Goddess.' Mistflower is grand with any fall foliage that reddens soon enough. In a cooperative season it's unforgettable with glossy scarlet wild sumac or the numerous red or orange hips of any rose so endowed. Red *Salvia miniata* and white asters are other good companions.

Other eupatoriums dismissed until recently in garden guides as "rank" and "ungardenworthy" no longer go unappreciated. And there are enough untried species to keep the curious among us busy. Native plant experts Britton and Brown, in their three volume reference *An Illustrated Flora of the Northern United States and Canada*, list 21 species and mention that "35 others occur in the southern and western parts of North America."

Those tall, mauve-flowered eupatoriums known as joe pye are finding wider garden acceptance. The European (*Eupatorium cannabinum* 'Plenum' and the English garden favorite, cultivar or hybrid, 'Gateway,' are most often offered for sale, but American natives *E. purpureum*, *E. fistulosum*, *E. dubium*, and *E. maculatum* are occasionally listed. Any one of them makes an imposing

Mistflower bloomed in the dry dooryard when my parents bought their home and still tenaciously flowers there with little care 50 years later.

garden feature with their attractive whorled leaves and great compound clusters of fuzzy mauve flowers. *E. purpureum*, a woodland species, has the palest bloom and is best for a shady or drier site. *E. maculatum* and *E. dubium*, of moist meadow and ditch, have reddish stems and more vivid flowers, while 'Gateway,' the dwarf among them at 5 ft., is useful in tighter quarters. Any of these can be star performers in the right setting, as in the late summer borders at Chanticleer, the former private estate now open to the public, in Wayne, Pa. Joe pye's close companions there are great clumps of hazy sea lavender, *Limonium latifolium*, and *Pervoskia atriplicifolia*'s bright lavender wands. Against this sliding scale of smoky purples, various yellow daisies in the neighborhood shine. Among more sea lavender of another view, *Agastache barberi*'s brilliant pink spikes loom against a tall backdrop of dark foliated, rosy-purple joe pye.





Christopher Woods, Chanticleer's director, cleverly enlists American wildflowers to soften and contemporize the formal layouts of other garden spaces. He's given boneset (*Eupatorium perfoliatum*) a central position in an entrance garden of geometric beds and stonework. Its gray-tinted green leaves and loose white, clustered bloom rise above low silver and other colored foliage that spill from the beds, with orange *Kniphofia* and a few red verbenas and rosy-purple *Verbena bonariensis* arranged among them.

Other natives enliven this garden. Woods is enthusiastic about *Scutellaria incana*. Here its 3 ft. downy stems form a spreading bushlet with many branching racemes of small lavender-blue labiate flowers. He grows this local native of moist woods and clearings with *Angelica gigas*, an enormous purple-stemmed and flowered Asian member of the carrot family, among soft lavender wands of *Buddleia* and *Perovskia* bordered by multitextured silvers. Close at hand, a chance joe pye seedling forms a few stemmed see-through clumps of elevated bloom. On a high bank behind it blooms *Helianthus hirsutus*, another wildflower that Woods has good words for.

This sunflower is among the 56 North American species of the *Helianthus* genus dismissed in the past as coarse and garish.

Yet many have useful attributes that might gain them entrance to a summer's end garden. *H. hirsutus* makes an airy forest of stiff-branched maroon-brown stems. Small and well-spaced leaves allow the plant's structure importance. Its open growth offers a small garden the contrast of scale without great bulk. The 3 in. yellow-centered blooms are a clear pale yellow and dot the plant to the ground. This tip-toe distribution enhances the sunflower's usefulness as an edge plant or as a freestanding specimen.

If you prefer a dark-eyed flower with a similar open habit and can wait another month or so for bloom, try *H. angustifolius*, the narrow-leaved sunflower. This is a graceful daisy of the coastal plain, of salt marsh and tidal estuary, found even in the moist folds of dunes. It has handsome near-black stems, narrow succulent textured, yet tough leaves, and showy yellow flowers that sometimes approach orange. An even narrower-leaved plains native I've been pining for is *H. salicifolius*, described as looking like a clump of lily foliage in its rise toward bloom. Christopher Lloyd, the British writer, has enthusiastically described this plant seen on a visit here as a hedge 150 yards long, its sprays of golden blooms flung at graceful angles and "magic in the autumn sun" under its hosts of monarch

butterflies — a new world spectacle at its most enchanting.

Helianthus mollis was the gift of a sunflower enthusiast who found an enormous stand of this locally uncommon wildling on a nature walk. Its gray foliage astonished me, it was so unlike any sunflower I knew. As with most gray-leaved plants, it has proved tolerant to dryness. Its habit is elegant and tailored, ranks of upright stems symmetrically sprout shadowy foliage, and it needs only light staking here, well into bloom time. A generous bouquet of blossoms decorate the top of each 4 ft. stem. They are pale primrose yellow with a self-colored eye. I plan to try it with the white, lacinated blooms of *Dianthus superbus* leaning through its firmly anchored stems for support.

When placing these robust spreaders, it's worth remembering Louise Beebe Wilder's caveat in one of her books' index listing: "Helianthus, ineradicable in the garden." I haven't found them to be so on my sandy soil, but others might want to isolate these vigorous natives or to plant them in bottomless plastic tubs until their nature can be assessed.



Golden composites are so easy, so available they have almost become a garden



cliche, but Pat Bowman uses late summer's yellow daisies with great drama and finesse throughout her Cape May Point wildflower garden. She's placed one clump of the free-flowering *Rudbeckia triloba* just beyond the low golden block of grass that fronts the dark facade of her home's entryway. This bright made brighter by a shaded backdrop strikingly rekindles esteem for some ravishing but common flower we've ceased to see. This fresh use of the familiar seems to me creativity of the highest order.

When I first grew *Rudbeckia triloba*, its craving for moisture surprised me. Who'd expect it of such a sunny daisy? But its way of popping back from wilt is reassuring. My sandy garden's see-saw availability of water has never deterred this less common black-eyed susan from a reliable show. It rises to ultimate gorgeousness, however, only on a rich heavy soil, such as Chanticleer's. Seeing the waist-high, billowing bushes there, thickly set with small golden, black-centered flowers, can make a flower lover wonder where this native has been hiding.

I was goaded to acquire one of this company at a recent plant sale by its cloak of mystery. The offshoot in a 2-in. pot was cryptically, enticingly labeled "green-eyed rudbeckia." The fragile newcomer grew to an airy, twiggy, glaucous-stemmed 8 ft.

Providently, I'd placed it in the vegetable garden near a faucet, for its shiny, deeply cut leaves regularly wilted. By mid-July bud break I felt reasonably sure it was *R. laciniata*, a drooping petalled daisy of stream banks and moist thickets. (This is one I probably wouldn't have tried if I'd been familiar with its preferred habitat.) It was awhile after the elevated, strap-petalled daisies began their sparse, random openings that I warmed to the plant. I was won by the way the green discs bronzed and lengthened after petal drop and by the way their tawny shadows showcased later yellow bloom. Scattered bloom on the still-handsome scaffolding surprised me by continuing until the hard frosts of mid-November. Also endearing was the simplicity of staking that this plant required. A single stout prop kept the whole rigid structure upright and unlisting.

Rudbeckia laciniata went abroad early to finishing school, and there are a number of useful garden forms. 'Herbstsonne' [sic] is reputed to be either a hybrid with or a selection of the closely related but slightly tender southern native *R. nitida*. It has showier, wider-petalled flowers and more noticeably elongated cones but a comparatively brief bloom period. That old garden fixture 'Golden Glow,' whose leaves and

lax growth pattern differ from my plant, is said to be a double form of this species, or more possibly a hybrid. A newer 3 ft. double 'Goldquelle' is often offered in the trade as a "dwarf 'Golden Glow.'"



As a pleasurable contrast in form and color to any of these golden composites, try *Veronicastrum virginicum alba*. From among the many August wildflowers that Joanna Reed grows and admires in her Chester County (Pa.) garden, she singled out this elegant and underused plant when asked for a recommendation. If ever a plant looked as if it belonged to the fairies, this is it. Fairy candles would be a better description for this rhapsodic being than its common name, culver's root. The tiny white flowers open closely spaced on a central taper and on other shorter side spires. Their protruding stamens create an aura of light along the wands' graceful lengths. I read that the plant exists in pale blue and pink forms, but I can't imagine the white failing to charm even those like myself whose hearts don't necessarily flutter at white flowers. Louise Beebe Wilder recommended the pristine spires of white culver's root as "very pretty as a background for salmon phlox." I see them sumptuous with purple



Far left: *Helianthus mollis*'s elegant gray foliage alone would gain it space in the author's garden. At left: Seeing *Rudbeckia triloba* in peak form at Chanticleer might make a flower lover wonder where this wildflower has been hiding.

When I asked Marion Glaspey, the founding gardener at the Wetlands Institute in Stone Harbor, N.J., what wildflower she valued for late summer garden bloom, she unhesitatingly named *Lobelia cardinalis*. Not surprising, since her own private garden slopes in dappled shade to a wooded and boggy wetland close by the marshy margins of the Delaware Bay.

loosestrife among much dark growth.

This luminary's garden absence may be at least partly attributed to the ugly rumor of its stoleniferous ways. At a plant sale where I bought my start (and where unsurprisingly they could hardly give this plant away), I received a caution bordering on the emotional. My advisor pleaded his case with a story of a bed solidly and for eternity possessed by immovable roots. This is a well-heeded warning, especially for moist soil gardeners. Yet, Joanna grows it on a heavy but dry and ever-unirrigated soil in a sunny meadow among other tall, showy spreaders and wishes it would multiply faster — so far.

When I asked Marion Glaspey, the
the green scene / July 1994

founding gardener at the Wetlands Institute in Stone Harbor, N.J., what wildflower she valued for late summer garden bloom, she unhesitatingly named *Lobelia cardinalis*. Not surprising, since her own private garden slopes in dappled shade to a wooded and boggy wetland close by the marshy margins of the Delaware Bay. Cardinal flower and its showy hybrids revel here, close to bottomland where they are bathed in the bog's damp breath no matter how parched the neighboring atmosphere.

Marion could very well choose to populate the hummocks in her developing bog garden with lobelia, since the ditch and streamside are its chosen haunts. It was in such a setting at the mutable edge of water and land where I first saw this wildflower, a scarlet blaze reflected in the dark cedar swamp water at Leamings Run Garden in Cape May Court House, N.J. With it, arching gracefully over the water, were ghostly *Eupatorium perfoliatum* and sprigs of an early goldenrod. All were softened by cascades of a grassy rush, and all were in brilliant flower. A cattail clump fanned upward behind the group. Since then, that natural confluence of form, color, and bloom has colored my expectations for this wildflower.

This fine understanding of lobelia's re-

quirements has also made me reluctant to try the plant. Yet recently in desperation I gambled a gift seedling on the questionable suitability of my garden's dampest environment, the half-shaded, downspout corner of my house. Even the most benign situation I can provide may not satisfy this ooze lover. (Williams's inspired idea of the bird-bath might tilt the odds.) I have, however, been a winner with another lobelia species. This is curious, since the wildflower guides say that *L. siphilitica* comes to me from the same "swamps and damp banks" as the cardinal flower. Why then does it hide its disappointment and grow so nicely in my borders, even in the unwatered reaches of the vegetable garden? What's more, it seeds!

The rich purple bordering on blue of *L. siphilitica* enlivens any yellow flowers I care to place it near. I grow it with golden variegated sage, sky blue salvia, and the latest of late pale yellow daylilies.



Perennials that serve the gardener throughout the season are a welcome rarity. I'd like to put in a good word for the flat-topped goldenrods, the lance-leaved *Solidago graminifolia* and the slender fragrant *Solidago tenuifolia*. Even though these fine wildflowers don't bloom until September, I've found them of August value. Their domes of fine, yellow-green foliage are attractive from spring emergence. This year, *S. tenuifolia* was the perfect shade and foil for tiger lilies that grew through and bloomed above. Later, its 2 ft. wide, exceedingly fragrant floral plates are manna for migrating butterflies. Their honeyed sweetness is given to the air; a bouquet will powerfully scent a room. If you can bring yourself to pick early, the juvenile flowers dry well. Outdoors the spent blooms hold their form and their darkening color well. I enjoy the extended season of their graceful retirement from August gold through bronze to December's richest sepia.

While both species are unfussy, gardeners having the choice might be advised that *S. graminifolia* hails from "damp places." *S. tenuifolia* calls sandy soil and the edges of salt marshes home. My plants of the latter came from an enormous stand at the perimeter of a soggy bayside field. Grown on acid soil near a blueberry bush in my garden and fed and watered along with the



At left: *Vernonia noveboracensis* grows in a wild, wet meadow on the author's property.

lilies, they doubled their expected dimensions to a surprising 4 ft. x 4 ft.

I really shouldn't be surprised. Doubtless, there are even larger ideally sited specimens somewhere — and also hordes of midgets self-reliantly indifferent to hard times. Wildflowers seem to thrive complacently at greater size extremes than their garden relatives and to flower freely even in the face of meteorological hardship. Awhile back I spotted perky 5 in. dwarfs that turned out to be my goldenrod's flowery brethern content in the destitution of a worked out field. Now as my pampered wildlings colored I was attracted by a reprise of their golden bloom just beyond the garden. Along the north border of a tall hedgerow opened identical blossoms just where for years I'd hopefully tossed this plant's seedy stems from spent bouquets. Although they rose on scrawny stalks, their bloom was impressively profuse for the reduced circumstances of shade and drought.

So, just as the vigor, brilliance, and adaptability of these and other wildflowers have enriched my garden, the floral resources of the late summer landscape can be significant to any other beset or dis-

criminating flower lover. There are wildlings for any configuration of growing conditions, needs, and tastes, and native plants can add a real dollop of August color to any garden.

Book References

An Illustrated Flora of the Northern United States and Canada, Nathaniel Lord Britton & Addison Brown, Charles Scribner's Sons, N.Y., 1913*; softcover: Dover Publishing, N.Y., 1970.

Wildflowers of the United States, (six volumes totalling 14 parts + index), New York Botanical Garden, N.Y., 1966-1973*.

* Available for members in the Pennsylvania Horticultural Society Library

Barbara Bruno sees no harm in a private gardener gathering seed or even a small plant of a common plentiful wildflower. She also believes that a golden age of American gardening is dawning with the belated recognition of the beauty and ecological suitability of our native floral diversity.

Sources

- 1 Canyon Creek Nursery
3527 Dry Creek Road
Oroville, CA 95965
Catalog \$2.00
- 2 Flora for Fauna
RD #3, Box 348
Friedreichstadt Ave.
Woodbine, NJ 08270
- 3 Holbrook Farm
115 Lance Road
PO Box 36B
Fletcher, NC 28732
- 4 Lamb Nurseries
101 E. Sharp Avenue
Spokane, WA 99202
- 5 Plant Delights Nursery
9241 Sauls Road
Raleigh, NC 27603
Catalog \$2.00
- 6 Plants of the Southwest
Aqua Fria
Route 6, Box 11A
Sante Fe, NM 87501
- 7 Prairie Nursery
PO Box 306
Westfield, WI 53964
Catalog \$3.00
- 8 Triple Oaks Nursery
(no mail order)
Route 47, Delsea Drive
Franklinville, NJ 08322

Plant List

(Source numbers listed above)

Source	Plant
1	<i>Eupatorium cannabinum</i> 'Plenum'
2	<i>Eupatorium coelestinum</i> , <i>E. maculatum</i> , <i>E. perfoliatum</i>
5	<i>Eupatorium</i> x 'Gateway'
1,3	<i>Helianthus angustifolius</i>
3	<i>Helianthus hirsutus</i>
8	<i>Helianthus mollis</i>
2,8	<i>Lobelia cardinalis</i>
4,8	<i>Lobelia siphilitica</i>
2	<i>Mondarda punctata</i>
4	<i>Rudbeckia</i> 'Goldquelle'
3	<i>Rudbeckia</i> 'Herbstsonne'
3	<i>Scutellaria incana</i>
2	<i>Solidago graminifolia</i>
6	<i>Vernonia missurica</i> (seed)
5	<i>Vernonia noveboracensis</i>
7	<i>Veronicastrum virginicum alba</i>

THE CONSUMMATE COLORIST

Marco Polo Stufano

by Ken Druse

“Sometimes I think it would be best to live in a black and white world,” claims Marco Polo Stufano, director of Horticulture at Wave Hill in the Bronx, N.Y. This former estate overlooking the Hudson River is now a 28-acre public garden. Stufano’s unexpected comment comes from this authoritative gardener, who has in his 26 years there, created one of the great

horticultural showplaces in America.

Even though Stufano is internationally acclaimed for his originality in the use of color, he knows that color is just a fragment of a great garden: “Color is the least interesting thing; a planting’s architecture is the most interesting. Without form and structure, color means nothing.” Stufano generally speaks in terms of spikes of

photo by Ken Druse



The view from the Conservatory's louvered, double-Dutch doors looks out at the center of the Flower Garden at Wave Hill, where Marco Polo Stufano directs his vibrant color-plays.



blue salvia, flat-pancake beds of amber coleus, asterisks of silver cardoon plants—shape first, then hues and tints. “If the sculpture of a garden is right, then you can play with color.”

Although utterly unpretentious, Stufano is ruthlessly opinionated. He scorns today’s overemphasis on color. As gardeners develop their craft, there is a danger that they may become obsessed with theory and imagine that every combination must conform to associations prescribed in books. “Ways to use color *can* be learned, but too many gardeners get bogged down when they go to apply these rules.”

“Color is the least interesting thing; a planting’s architecture is the most interesting. Without form and structure, color means nothing.”

Stufano once overheard supposed experts criticizing the plantings in The Flower Garden at Wave Hill. One remarked, “Pink and yellow should never be used together.” “Why not?” Stufano asks, “Have they never seen Chinese porcelains where this ‘garish’ mix of canary yellow and clear pink is wonderful?” His inspirations come from

everywhere: porcelain, fabric, even a highway meridian in Yonkers, N.Y., where he once saw purple *Salvia splendens* and blue *S. farinacea* planted side by side. “That’s something I never would have thought of, but they were perfect together.” Judging by Stufano’s remarkable mixtures, using color well takes talent, observation, foresight and any excuse to break the rules. “Don’t be afraid to do something outlandish.”

“I really hate gardens that are so thought out you know **this** is what they’re doing here and **that’s** what they’re doing there. Nature doesn’t work like that. Go out in the wild. Look at a meadow. You don’t see the



Above left: The Southeast bed (foreground) demonstrates that color isn't everything; Stufano also relies on foliage texture and structure for visual effect. There's interest with or without flowers from flat rosettes of chrysanthemum, whorls of lily leaves spiraling up rigid stems and arching iris blades. **Above right:** Beyond this quadrant lies the Northeast bed, with shades of red — again, not just from salvia and aster flowers, but from the foliage of orach, dahlia, purple smoke bush and an unusual burgundy honey locust. Silver foliage provides a colorful foil.

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blue section, or the pink or the silver. You have a scattering of color; and few years are exactly the same." In the real world, there has to be room for accidents — space for many self-sowns — for pulling one color through the garden with red perilla or amaranthus seedlings, for example, that just come up. These help make the continuity. Repeat a color again and again, then stop, or alter it slightly. Most of that work is editing — removing the overabundance of certain annuals. "We all kill plants; the trick is knowing **when** to throw them away."

This kind of personal experimentation is

rarely permitted in a public place. Unconventional concoctions such as Stufano's would be ingenious in a private garden: they are astonishing in a public one. Unlike other municipal institutions, the permanent stuff here isn't made of paving stone or iron: it's the memories of hot pink with lemon yellow, silver-blue and lime-green. One has to defy tradition to create such vividly enduring images.



The Flower Garden, planted to the South of the restored greenhouse, is the great case in point. In the winter, the formal layout of

the garden is evident. It is a large rectangle framed by a running mixed border surrounded by a split-rail fence. The interior is quartered by brick paths that have a "bull's eye" of stone paving at their intersection. At the ends of the long axis the running border and fence are interrupted by covered rustic benches. The shorter axis connects the garden entrance to the greenhouse. Gumdrop yews, the linear paths, the fence and the benches are the year-round elements of the garden. The central feature sports an arrangement of potted plants with a typically Victorian accent. One year it was a potted *Yucca rostrata* with a tan



Above: Immediately to the left of the garden's entrance are colorful flowers such as *Hosta plantaginea*, *Impatiens balfouri*, and dahlia seedling with orange blooms. Beyond this planting the Southwest beds feature a controlled scheme of yellow and white flowers with silver, gold and variegated foliage. **Right:** Arrangements of potted plants that change every year occupy the center of the garden. Again, foliage reigns with a pointy architectural accent from *Dasyllirion wheeleri* surrounded by four rare potted variegated boxwoods.

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trunk and silver blades. Subdued waves of silver and gray evergreens hug the greenhouse foundation. The formal structure of this space maintains order as the plantings themselves are permitted to run wild — an invaluable tactic for those who want a casual, naturalistic look.

It is this inside area with its rollicking color schemes that upstages the view beyond the garden to the New Jersey Palisades across the river. By June, climbing roses 'New Dawn' and 'Madame Gregoire Staechelin' have nearly obscured the benches with garlands of pink flowers. The fence is threaded with clematis and honeysuckle and softened by rose bushes and herbaceous perennials with sanguine foliage. In mid-summer as The Flower Garden approaches its autumnal crescendo, the paths are barely discernible — their edges hidden by the blowsy plants that give this place its intensely romantic, cottage-garden appearance. The paths are narrow: uncharacteristic for a public garden — not wide enough for twins in a double stroller or a camera tripod. The main opening in

the garden's fence leads to the path that terminates at the greenhouse entrance. A baroque staging of terra-cotta pots overflowing with tender plants bearing harlequin foliage and foamy flowers flanks the doorway.

Each of the four sections is cut by a secondary path creating eight beds. The interior ones, around the potted plants, are filled with Stufano's favorites: silver-foliage specimens from the Mediterranean region, and plants such as *Perovskia atriplicifolia*, *Stachys lanata*, *Artemisia* 'Lambrook Silver' and *Salvia argentea*. Others in these beds include *Chrysanthemum pacificum*, *Aster* 'Little Carlow,' *Salvia farinacea* x *longispicata* 'Indigo Spires,' *S. mexicana minor*, *S. vanhoutii* and *Calamintha nepeta* sub. *nepeta* with innumerable cymes of 20 or more white flowers. A white *Alyssum maritimum* edges these plantings and spills onto the brick-paved path. The color strategy for these beds seems to be like blue ice and summer snow.

It was the late John Nally, curator of the Gardens, who originally imagined distinct

continued







In the Northwest bed, Stufano defies design "rules" by juxtaposing complementary colors, lilac and yellow, using plants such as sunflower-like *Helianthus* and lavender butterfly bush. The contrasting elements are buffered by the billowy, green-white blossoms of *Hydrangea arborescens* 'Annabelle' (background, left).

divisions of color for the outer four beds. The first one designed, the Northeast bed, was to be in shades of red to burgundy. At one time, annual red-leafed *Ricinus communis*, castor bean, dominated this area.

The concept remains, but compulsive collecting has replaced the giant castor bean with all kinds of plants with red foliage and flowers. The permanent woody ones comprise purple-leaf sand cherry, *Prunus x cistena*; purple smoke bush, *Cotinus coggygia* 'Atropurpureus'; and an uncommon red honey locust with a delicate texture, *Gleditsia triacanthos inermis* 'Rubylace.' These are pruned yearly. Other plants are a raucous single red dahlia with maroon foliage, the red-leafed form of *Lysimachia ciliata*, an unidentified species of *Amaranthus* (nicknamed "231 Street" for the spot where it was found), pink cosmos, red-flowered salvias and the unusual amaranth-like "orach," *Atriplex hortensis* 'Cupriata.'

Diagonally across the garden, the Southwest bed more-or-less conforms to a conscious plan represented by white and yellow flowers and foliage. Blending here are a white cultivar of *Echinacea pupurea* 'White Lustre,' a yellow pompom dahlia, a variegated cream and gray-green comfrey (*Symphytum x uplandicum* 'Variegatum'), a nearby variegated *Kerria japonica*, billowy

He just knows what looks good.

white-to-green flower clusters of *Hydrangea arborescens* 'Annabelle' and yellow-leafed *Filipendula ulmaria* 'Aurea.' Contrasts are provided by a shrubby clematis with blue flowers, a silvery willow, and a self-sown "see-through plant," *Verbena bonariensis*, whose wands tipped with lavender flowers punctuate the scrambled egg colors.

The Northwestern bed bares the rugged pink and canary yellow. Yellows come from *Helianthus autumnale*, *Coreopsis verticillata* and dahlia; pink from buddleia, mallow (*Lavatera thuringiaca*) and *Phlox paniculata*. The beautiful clary sage, *Salvia scalarea*, mediates the complementary colors.

The Southeast quadrant is filled with tried-and-true standards selected, or permitted, to perform. There are varieties of buddleia, red-flowered asters, more perilla and amaranthus, and an edging of *Heuchera* 'Palace Purple.' Accidents can and do happen here. An *Argemone mexicana* with leaves like a thistle and yellow poppy flowers was allowed to stay in this bed when it appeared by chance. Stufano was going to weed it out because he feels there

is value in not reprising plants from the various areas at Wave Hill, and this prickly poppy already grows in The Wild Garden; but then he thought — "Why not; it looks pretty good here."

Marco Polo Stufano's humility keeps him from accepting credit for these inventions. He maintains that many of the Wave Hill color creations are the products of an open mind — accepting of happenstance. Sculptural arrangement of shapes and forms, mass and texture, can be intellectualized, however the sense of color comes from within. Color, in fact, is one of the few things to which he is willing to relinquish control and credit. These striking compositions have the mark of a consummate colorist who revises and amends without ponderous deliberation — he just knows what looks good.

Ken Druse, author of seven books, including *The Natural Habitat Garden*, published by Clarkson Potter this past April, *The Natural Garden*, now in its fifth printing, (Clarkson Potter, 1988), and *The Natural Shade Garden*, (Clarkson Potter, 1992), has helped to popularize the American natural gardening movement. Druse has just been named Series Editor for the Master Gardening Books produced by the New York Botanical Garden.

Three Garden Experts Differ About Color in the Landscape



by W. Gary Smith



In the Azalea Woods at the Garden at Winterthur, azaleas are arranged in uniform color masses. The pinks and mauves are provided by Kurume azalea cultivars, and the white mass is *Rhododendron* 'Snow.' The red in the background comes from *Rhododendron arnoldianum*.

photo courtesy of Winterthur Museum,
Garden & Library

Three Garden Experts . . .

Each of us has a unique color sense. We all know color combinations that are pleasing, as well as combinations that we despise. I might think that orange and purple combine to create beautiful tension, while to your eye they might clash in an unpleasant way. In my own search for the meaning of color in the landscape, I visited with three very different horticulturists and discovered that they share a central theme: each gardener must continually develop a personal relationship with color. All personal points of view are valid, even though they may be very different. What's most important is that we each seek to understand and develop our own color sense.

The garden at Winterthur

Denise Magnani, director of Landscape at Winterthur Museum, Garden, and Library in Winterthur, Delaware, is responsible for preserving the living legacy of H. F. du Pont — one of the Delaware Valley's greatest horticulturists. Magnani, author of a forthcoming book on du Pont and his garden, spends a great deal of time reflecting on what color meant to him: "For him, color made the landscape come alive in a joyful way."

"Color is the thing that counts more than any other," du Pont wrote.

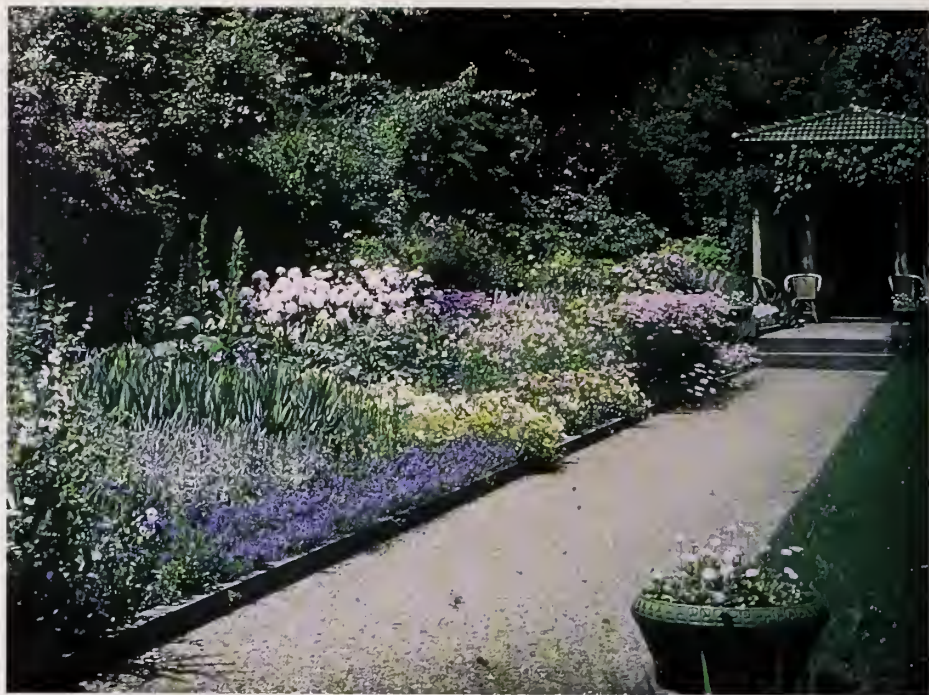
During more than 50 years of gardening,

When entertaining, du Pont would select the tableware and linens to harmonize with the cut flowers brought in from the garden, conservatory, or surrounding fields and meadows.

du Pont developed a highly refined sense of color. Although familiar with the color theories of Gertrude Jekyll, William Robinson, and other early 20th century garden writers, he felt that personal experimentation with color in the garden was better than studying color theory in books. As one of the earliest owners of a Lumiere Autochrome camera, he recorded the seasonal progression of color at Winterthur on colored glass slides. Du Pont was a keen observer and prolific notetaker, but he never articulated a written theory of color. However, his hundreds of glass slides — as well as the glorious garden itself — are a rich legacy of his experimentation with color.

H. F. du Pont's most famous color combination is lavender and yellow — specifically, lavender Korean rhododendron (*Rhododendron mucronulatum*) with yellow

photo courtesy of Winterthur Museum, Garden & Library



When H. F. du Pont was traveling, his staff would photograph the progression of color in the garden so he could study the color combinations when he returned. This duplicate of a glass slide, taken between 1916 and 1920, records combinations of yellows and lavenders in a formal perennial border at Winterthur.

winterhazels (*Corylopsis pauciflora*, *platy-petala*, *spicata* and a *pauciflora* hybrid called 'Winterthur.') How is it that these potentially clashing colors don't shriek a discordant tone in the garden? Magnani explains that these shades of yellow are very pale, and cooled with a hint of char-treuse, while the lavender is warm and rosy. A warm or golden yellow (as found in most forsythias, for example) would be too harsh, and a pinkish lavender would clash. These distinctions between fine shades and tints may seem excessively obscure — hardly worth the bother for the average gardener. But they exemplify H. F. du Pont's keen visual discernment, honed over many years of experiment and observation.

Seasonal fresh flowers were always brought into the house at Winterthur. Du Pont, not fond of mixed arrangements, would have them arranged in single-species masses — similar to the way colors occurred in his garden. The seasonal color changes in the garden were also reflected in the interior decor. Textiles, such as draperies, would be changed up to four times a year to harmonize with the progression of colors in the view outside. H. F. du Pont paid great attention to detail, inside the house as well as in the garden. When entertaining, he would select the tableware and linens to harmonize with the cut flowers brought in from the garden, conservatory, or surrounding fields and meadows.

While du Pont was best known for his inventive use of contrasting colors, such as the rhododendron-winterhazel combination, most of the garden spaces at Winterthur feature analogous or harmonious color

schemes. As the seasons progress, the color interest moves from one part of the garden to another. The March Bank begins the progression with yellow winter aconite in combination with white snowdrops and lavender *Crocus tomasinianus*, followed by huge sweeps of blue chionodoxas and scillas.

In April the color interest moves to the pink-and-white Sundial Garden, where magnolias, quince, cherry, crabapples, lilacs and viburnums bloom in rapid succession. The Azalea Woods picks up the show in May, with the color palette dominated by a variety of pastel pinks. To maximize the visual impact of the pastels, du Pont arranged the various shades of pink azaleas in large uniform masses that flow through the woods. The June Garden (now known as the Sycamore Area) features late flowering trees and shrubs including viburnums (whites and pinks), lilacs (lavender), kousa dogwood (white), and stewartias (white). Climbing roses arranged along a fence add pinks, pale yellows, whites, and some red to the composition. Summer is the time of green. Du Pont loved all the variety of greens in nature, and once wrote to a friend that "green is one of the prettiest colors there is." Toward the end of his life, du Pont was developing ideas for extending color into the summer months — an experiment the Winterthur staff continues today.

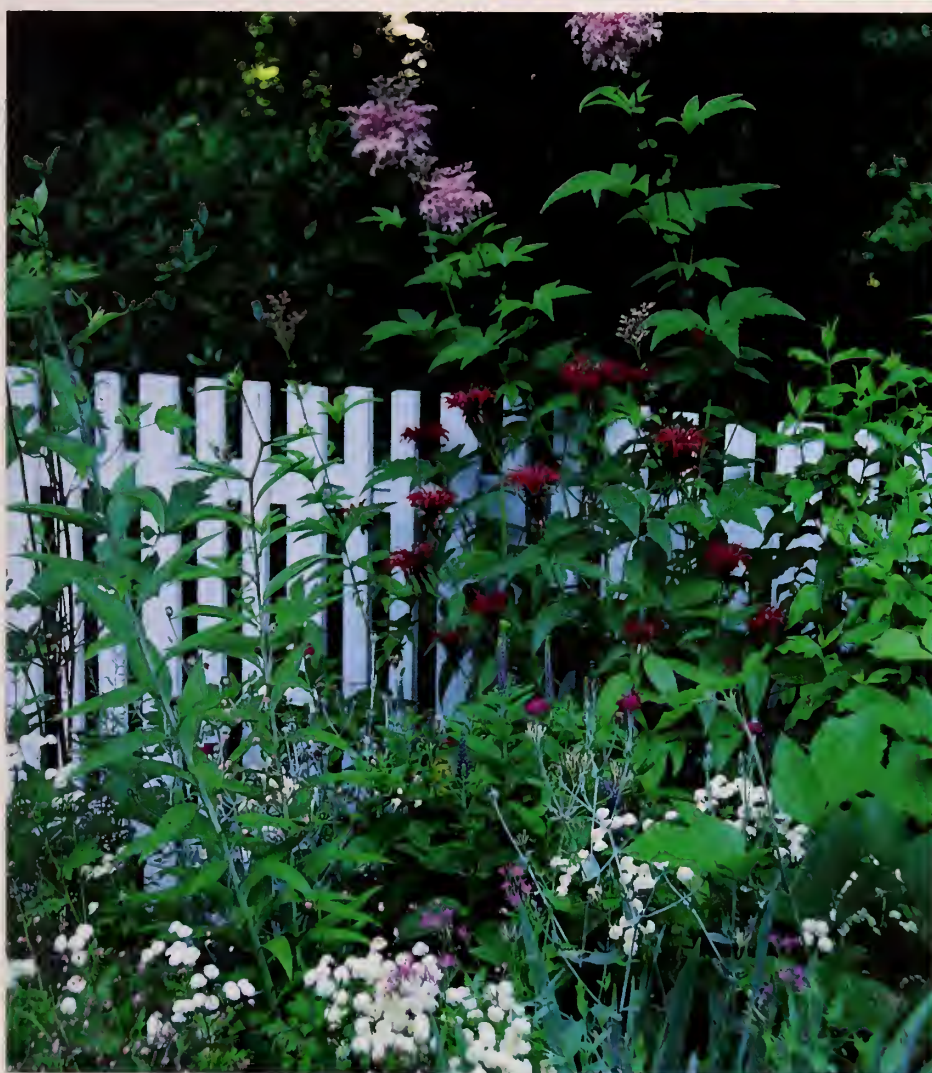
Charles Cresson

Horticulturist and author Charles Cresson agrees that personal experimentation with color is more important than becoming an expert on color theory.



Above: In Charles Cresson's sunny perennial border in Swarthmore, Pa., warm and hot colors, such as yellows, oranges, and reds, hold up well under the bright light.

At left: Cresson's shady border features cooler tones, such as pink and white. The deep red of *Monarda* provides a strong focal point.



Color preferences vary from person to person, and "the authorities don't always know what's best for you," he says. Cultural tastes and fashions change, and what's "in" today might be "out" tomorrow.

Cresson's own garden is featured in *Charles Cresson on the American Flower Garden*, one of the books in the Burpee Expert Gardener series (Prentice Hall, N.Y., 1993). The garden's centerpiece, where two large perennial borders face each other across a simple expanse of green lawn, demonstrates what's "in" for Charles Cresson. One border contains pastel pinks, mauve, white, and pale yellow (the kind of yellow that has a hint of cool chartreuse). The other has hotter, stronger colors including oranges, yellows, and a liberal use of red. Blue and purple are used as accents in both.

The sun's position played an important role when Cresson designed the two borders: the pastel border is placed where it will be sheltered from the harsh afternoon sun, which could wash out the delicate tints and pastel shades, and the hot-colored border gets the full sun treatment, where the strong light brings out the depth and intensity of warm tones.



Cresson has few hard rules about color, with one exception: "I don't like mauve with orange, because I detest mauve and lavender mixed with hot colors like yellows and golds. Everything else, as far as I'm concerned, can go together."

Sometimes, the most successful plant combinations are hit upon almost by accident. The main goal is to get a succession of color, with something happening at every time of the year. Gardening on a small lot, when you can't grow huge sweeps of a single plant, you adopt a smaller scale and a much looser style. Different plants or plant combinations are "loosely segregated," or kept separate from each other by gray foliage or white flowers. This kind of structuring allows for maximum experimentation, especially important if you are an avid gardener who loves to try out new plants each season. "I can find a place for almost any plant I want," Cresson says.

How do you start to get color into your garden? "You know what colors you like to wear," Cresson says, "so move that kind of thinking into your garden." The first step is just to start growing some things. Have some success. Find out what grows for you. Unlike woody shrubs and trees, herbaceous plants are easy to change. You can move them around and create different combinations. Work around the plants that do well in certain spots. As your eye becomes more attuned to what pleases you, you can add

new plants and hone the selection process down to a fine art.

Some gardeners feel limited by either too much sun — or worse — too much shade. Can you have strong or hot colors in the shade? According to Cresson, the answer is simple. Astilbe, cardinal flower (*Lobelia cardinalis*, a northeastern U.S. native), and red impatiens will provide vivid color in full shade. White and bright pinks can lighten up shady spots.

Or, you can take a more subtle approach and use foliage plants for color in the shade. With foliage plants you must aim for strong contrasts or the effect will be lost in subtlety. Avoid complicated combinations that are too busy with too many contrasts. Set down a rather uniform field and then accent it with some strong contrasts here and there.

Cresson offers good advice on making seasonal changes easier to orchestrate. "Once you've established a color theme for a particular spot," he says, "it's easier to work within that theme throughout the year." It's much more difficult to make smooth transitions when you try to change the color theme each season. Then again, you might prefer your own transitions to be more challenging. "After all, it's what you like that's most important," Cresson says.

Rick Darke

"I want to speak up for the greens," says

photo by Rick Darke



At top: The new spring leaves of striped maple (*Acer pensylvanicum*), backlit by the sun. "I think this represents the best of the lime greens," says Rick Darke.

Above: The clear yellow color of sugar maple (*Acer saccharum*) is intensified by the deep blue autumn sky.

Rick Darke, curator of Plants at Longwood Gardens in Kennett Square, Pennsylvania. Darke is one of the Delaware Valley's strongest voices for using native plants in the garden. "When I'm out in the woods," he says, "I'm almost disturbed by color, except green." When you're really tuned in to the native landscape, you're tuned in to a simplified color palette, mostly subtle variations of browns and greens. It's not that your senses are dulled down, but that your awareness is heightened.

According to Drake, the native landscape has distinct seasons of color. One day you find yourself at the end of a long winter, and your senses have become attuned to a pared-down palette of pale grays and soft tans. In the meadow, all the grasses and wildflowers seem bleached to a pale brown. The winter sunlight is pretty strong, and the colors seem washed out. An occasional grassy drift of *Andropogon* (native blue-stem) is backlit by the sun, glowing an intense orange. In a distant woodlot the twigs of *Nyssa sylvatica* (black gum) form a cold steel gray backdrop, yet the color of a nearby grove of sassafras has a warmth to it. There are a few evergreens present — American holly and red cedar — which have become rather drab by late winter. Then suddenly, within a few short weeks, the entire landscape changes to intense green.

The forest erupts pretty quickly into the lime greens. This lasts for about two weeks as the young leaves expand in the canopy layer, and then the limes darken quickly. The spring colors for wildflowers are cool, mostly white and pastels of pink and blue. Some hints of yellow occur, such as the flowers of spice bush (*Lindera benzoin*). White, the color that contrasts best with green, is also the most common spring flower color. "I wouldn't want any other color to dominate that landscape," Darke says.

In early summer the entire native landscape is green, field as well as forest. What about all those bright yellow mustards that cover the fields in early June, followed by white Queen Anne's lace and oxeye daisies, and blue chicory? "I love those plants," Darke says, "and they make an important contribution to the natural landscape. But, technically, none of those plants are native to the northeast. They're all imported and naturalized."

In the true native meadow the only color is green, well into July. In the native woods, green dominates until fall. It's interesting to compare the greens of the native landscape with the bright colors of annuals and perennials common in the June garden.

Du Pont loved all the variety of greens in nature, and once wrote to a friend that "green is one of the prettiest colors there is."

In July and August, yellow blooms in the meadow, with *Rudbeckia* and several species of goldenrod. (Incidentally, goldenrod is not a major hay fever plant, and its bright yellow color is the proof. Brightly colored flowers tend to be insect pollinated, so they don't need to produce great quantities of pollen. Plants with insignificant or dull green flowers, such as ragweed, are wind pollinated and produce huge clouds of pollen. Ragweed and goldenrod come into flower at the same time, with the showy goldenrod taking a bum rap for the ragweed's prolific pollen release.) In late August and early September, the yellows are mixed with contrasting blues and purples of asters, and the deep purple of New York ironweed. The atmospheric humidity drops, and the sky becomes a deeper blue at about the same time the purples come in.

Fall is the most dramatic time for color. Darke says, "Our northeastern fall landscape has the most dramatic color in the world," matched only in similar climate zones in northeast Asia. "We get these really bright, clear oranges and reds (maples) and then deep maroons (oaks, ash), with clear yellows (tulip poplar). Beech leaves never become a pure gold, always having a hint of brown and a hint of

green. *Carpinus* (hornbeam) get these incredible ochre tones, with red. *Nyssa sylvatica* (black gum) has a color all its own." The latter, also known as tupelo, has vibrant burgundy red leaves in full sun, but in shade the leaves turn a pale, pinkish cantaloupe. One of Darke's favorite fall plants is maple leaf viburnum (*V. acerifolium*). "These leaves actually have a blue cast," he says, "with hints of clear cold pink grading into soft purples and these incredible blue overtones."

As fall gives way to winter the reds fade out first, and you're left with yellows grading into tans and browns. Occasionally you'll see something hanging on to a late red in the native landscape, like a late red oak. Eventually, as winter comes in, the colors drain away to the spare palette of grays and tans. "So if you're not really tuned in to subtle variations," Darke says, "winter can seem dull."

In brief, this is how Darke sees the seasonal color cycle: winter, the least colorful; spring, colorful with greens, whites, and pastels; summer with shades of green; fall, the most colorful and dramatic. Darke suggests planning color in the garden to reflect the changing colors in nature. He acknowledges, however, that it may be difficult to convince people to plan a monochromatic green phase for June. "How many people do you know who would plan their color in the garden to be just green for three weeks, or a month?" he asks. "The absence of color — or even minimizing color — is rarely a goal in the garden."

W. Gary Smith is associate professor of Landscape Design in the University of Delaware's Department of Plant & Soil Sciences. Outside the classroom, he divides his time between designing gardens, drawing, and painting.

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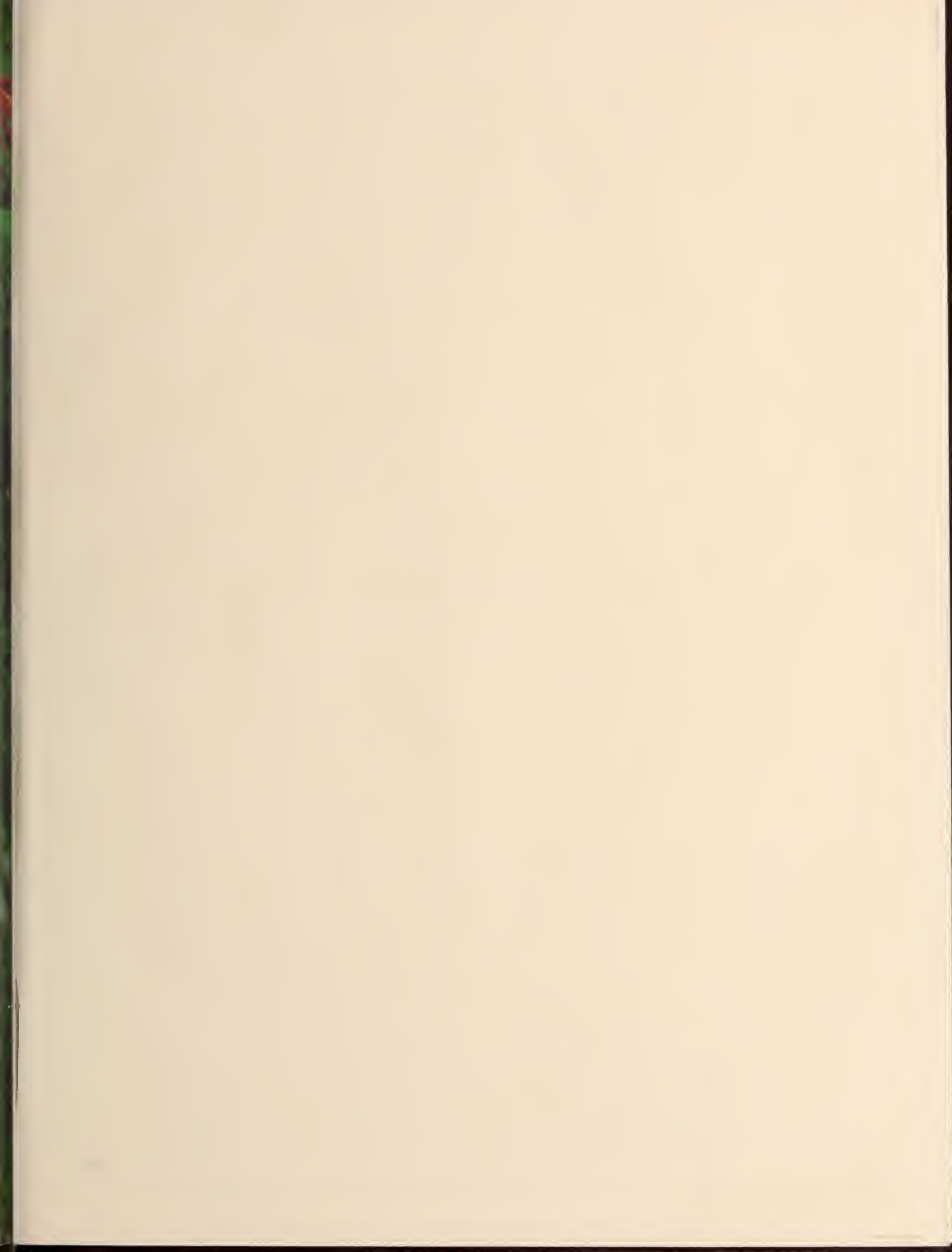
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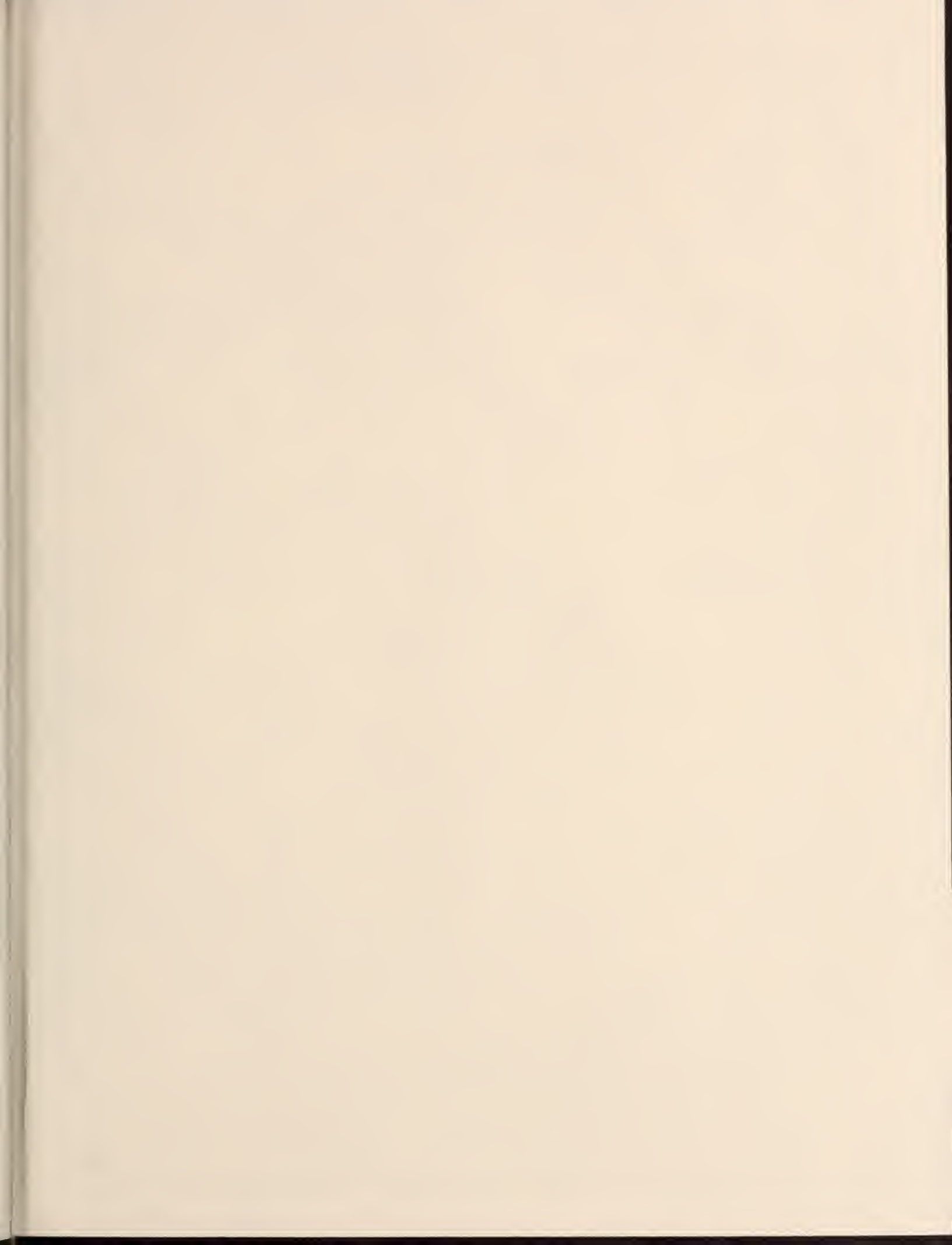
A color combination that "happened by accident," in Charles Cresson's garden. The trumpet honeysuckle has deep orange flowers with light magenta-pink accents. An old-fashioned climbing rose, 'Zephirine Drouhin,' has magenta-pink blossoms that match the highlights of the honeysuckle's flowers. See story on page 31. Photo by Charles O. Cresson

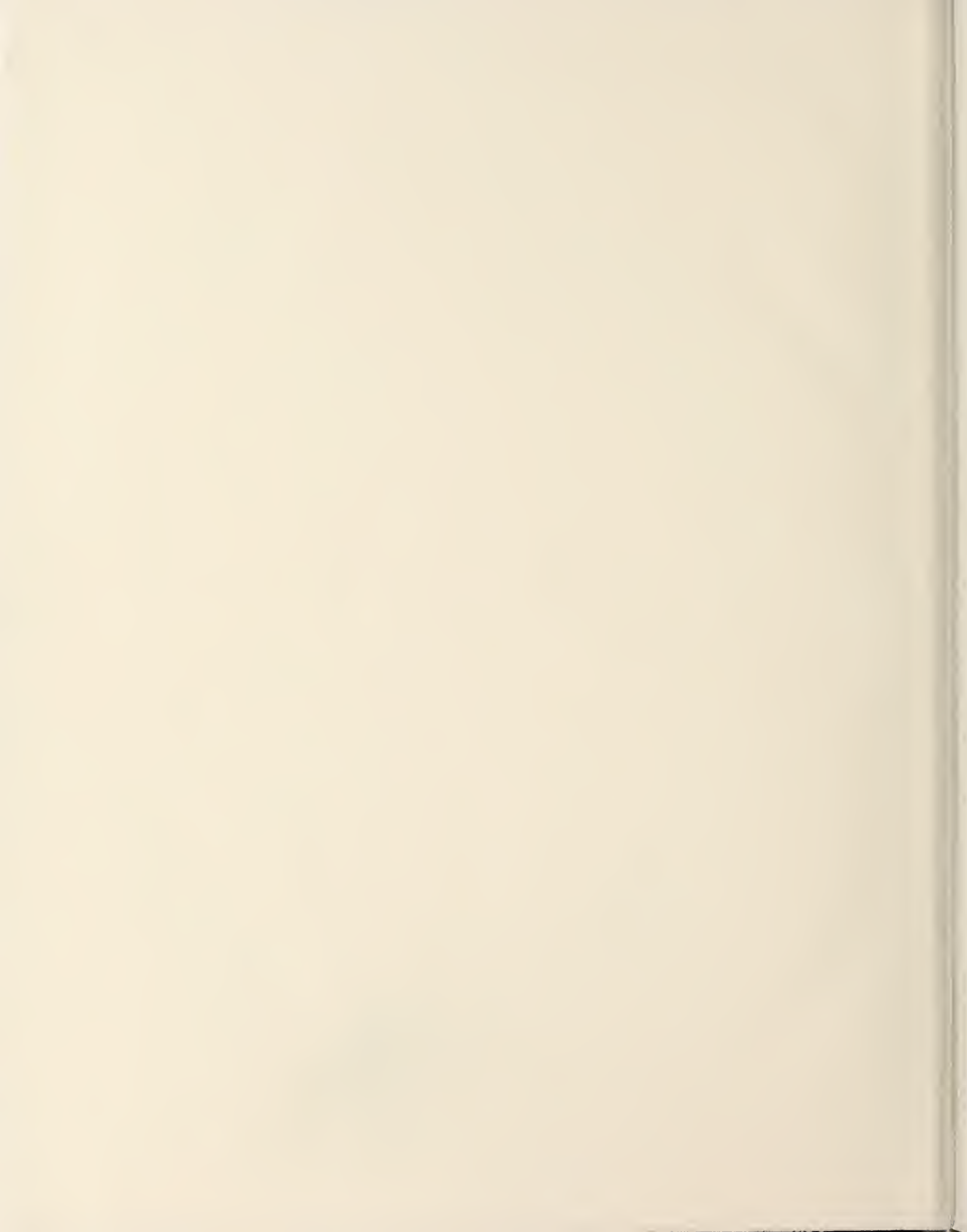
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